

*With the globalization of production as well as markets, you need to evaluate your international strategy. Here's a framework to help you think through your options.*

## Managing Differences

### The Central Challenge of Global Strategy

by Pankaj Ghemawat

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# Managing Differences

## The Central Challenge of Global Strategy

### The Idea in Brief

You're poised to compete on the global stage—but which strategy will you use? Will you employ **aggregation**, achieving economies of scale by standardizing regional or global operations? What about **adaptation**, boosting market share by customizing your processes and offerings to meet local markets' unique needs? Will you consider **arbitrage**, exploiting differences by (for example) offshoring some processes to countries with cheap labor?

According to Ghemawat, your predominant type of business expense suggests one of the "A's." For example, heavy investment in advertising indicates a possible need for **adaptation** to local markets. An R&D focus suggests **aggregation** for its economies of scale. And a preponderance of labor expenses hints at **arbitrage**.

But be prepared to change your strategy or combine several options as your business needs evolve. By opening your mind to the full range of possibilities, you broaden perceived opportunities, sharpen your strategic decisions, and enhance global performance.

### The Idea in Practice

How to shift among aggregation, adaptation, and arbitrage—or combine several of them? Ghemawat offers these guidelines:

#### CHANGE YOUR STRATEGY AS NEEDED

Emphasize different "A's" at different points in your evolution as a global enterprise.

► Example:

IBM long pursued **adaptation**. It served overseas markets by establishing a mini-IBM in each target country that performed a complete set of business activities and adapted to local differences as necessary. But when IBM saw that country-by-country adaptation had significantly curtailed opportunities to gain international scale economies, it **aggregated** the countries into regions to improve coordination and thus scale.

#### CONSIDER INTEGRATING TWO STRATEGIES

Trying to excel at *all* three A's presents overwhelming complexity. But some firms have successfully managed the tensions in balancing two A's. The key? Deploy integrative structures and systems.

► Example:

Indian IT company Tata Consultancy Services has traditionally emphasized **arbitrage**—by exporting software services to markets with higher labor costs. But it has begun augmenting this strategy with **aggregation**—building a new, coherent global delivery structure comprising three kinds of software development centers. Global centers, located mostly in India, serve large customers and possess breadth and depth of skill as well as coding and quality control processes. Regional centers (for example, in Brazil and Hungary) have select capabilities and emphasize addressing language and cultural challenges. Near-shore centers (such as in Boston and Phoenix) focus on building customer comfort through proximity.

► Example:

Procter & Gamble balances **aggregation** and **adaptation**. It created global business units (GBUs) that retain ultimate profit responsibility but sell through market development organizations (MDOs) aggregated up to the regional level. To manage tensions between the GBUs and MDOs, P&G allows room for differences across business units and markets. For instance, its pharmaceuticals division, with distinct distribution channels, is not part of the MDO structure. And in emerging markets, where market development challenges loom large, country managers still have profit responsibility. Protocols determine how different decisions are made, and by whom—the GBUs or MDOs.

#### EXPLORE EXTERNAL INTEGRATIVE MECHANISMS

To blend several A's, don't assume you must rely only on internal integration mechanisms. External integration can take several forms.

► Example:

Like other high-tech firms, IBM has used joint ventures in advanced semiconductor research, development, and manufacturing; links to Linux and other open innovation efforts; and some outsourcing of hardware to contract manufacturers. It has also forged a relationship with Chinese PC manufacturer Lenovo in personal computers.

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# Managing Differences

## The Central Challenge of Global Strategy

by Pankaj Ghemawat

When it comes to global strategy, most business leaders and academics make two assumptions: first, that the central challenge is to strike the right balance between economies of scale and responsiveness to local conditions, and second, that the more emphasis companies place on scale economies in their worldwide operations, the more global their strategies will be.

These assumptions are problematic. The main goal of any global strategy must be to manage the large differences that arise at borders, whether those borders are defined geographically or otherwise. (Strategies of standardization and those of local responsiveness are both conceivably valid responses to that challenge—both, in other words, are global strategies.) Moreover, assuming that the principal tension in global strategy is between scale economies and local responsiveness encourages companies to ignore another functional response to the challenge of cross-border integration: arbitrage. Some companies are finding large opportunities for value creation in ex-

ploiting, rather than simply adjusting to or overcoming, the differences they encounter at the borders of their various markets. As a result, we increasingly see value chains spanning multiple countries. IBM's CEO, Sam Palmisano, noted in a recent *Foreign Affairs* article that an estimated 60,000 manufacturing plants were built by foreign firms in China alone between 2000 and 2003. And trade in IT-enabled services—with India accounting for more than half of IT and business-process offshoring in 2005—is finally starting to have a measurable effect on international trade in services overall.

In this article, I present a new framework for approaching global integration that gets around the problems outlined above. I call it the AAA Triangle. The three A's stand for the three distinct types of global strategy. *Adaptation* seeks to boost revenues and market share by maximizing a firm's local relevance. One extreme example is simply creating local units in each national market that do a pretty good job of carrying out all the steps in the supply

chain; many companies use this strategy as they start expanding beyond their home markets. *Aggregation* attempts to deliver economies of scale by creating regional or sometimes global operations; it involves standardizing the product or service offering and grouping together the development and production processes. *Arbitrage* is the exploitation of differences between national or regional markets, often by locating separate parts of the supply chain in different places—for instance, call centers in India, factories in China, and retail shops in Western Europe.

Because most border-crossing enterprises will draw from all three A's to some extent, the framework can be used to develop a summary scorecard indicating how well the company is globalizing. However, because of the significant tensions within and among the approaches, it's not enough to tick off the boxes corresponding to all three. Strategic choice requires some degree of prioritization—and the framework can help with that as well.

### Understanding the AAA Triangle

Underlying the AAA Triangle is the premise that companies growing their businesses outside the home market must choose one or more of three basic strategic options: adaptation, aggregation, and arbitrage. These types of strategy differ in a number of important ways, as summarized in the exhibit "What Are Your Globalization Options?"

The three A's are associated with different organizational types. If a company is emphasizing adaptation, it probably has a country-centered organization. If aggregation is the primary objective, cross-border groupings of various sorts—global business units or product divisions, regional structures, global accounts, and so on—make sense. An emphasis on arbitrage is often best pursued by a vertical, or functional, organization that pays explicit attention to the balancing of supply and demand within and across organizational boundaries. Clearly, not all three modes of organizing can take precedence in one organization at the same time. And although some approaches to corporate organization (such as the matrix) can combine elements of more than one pure mode, they carry costs in terms of managerial complexity.

Most companies will emphasize different A's at different points in their evolution as global

enterprises, and some will run through all three. IBM is a case in point. (This characterization of IBM and those of the firms that follow are informed by interviews with the CEOs and other executives.) For most of its history, IBM pursued an adaptation strategy, serving overseas markets by setting up a mini-IBM in each target country. Every one of these companies performed a largely complete set of activities (apart from R&D and resource allocation) and adapted to local differences as necessary. In the 1980s and 1990s, dissatisfaction with the extent to which country-by-country adaptation curtailed opportunities to gain international scale economies led to the overlay of a regional structure on the mini-IBMs. IBM aggregated the countries into regions in order to improve coordination and thus generate more scale economies at the regional and global levels. More recently, however, IBM has also begun to exploit differences across countries. The most visible signs of this new emphasis on arbitrage (not a term the company's leadership uses) are IBM's efforts to exploit wage differentials by increasing the number of employees in India from 9,000 in 2004 to 43,000 by mid-2006 and by planning for massive additional growth. Most of these employees are in IBM Global Services, the part of the company that is growing fastest but has the lowest margins—which they are supposed to help improve, presumably by reducing costs rather than raising prices.

Procter & Gamble started out like IBM, with mini-P&Gs that tried to fit into local markets, but it has evolved differently. The company's global business units now sell through market development organizations that are aggregated up to the regional level. CEO A.G. Lafley explains that while P&G remains willing to adapt to important markets, it ultimately aims to beat competitors—country-centered multinationals as well as local companies—through aggregation. He also makes it clear that arbitrage is important to P&G (mostly through outsourcing) but takes a backseat to both adaptation and aggregation: "If it touches the customer, we don't outsource it." One obvious reason is that the scope for labor arbitrage in the fast-moving consumer goods industry may be increasing but is still much less substantial overall than in, say, IT services. As these examples show, industries vary in terms of the headroom they offer for each of the three A strategies.

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Even within the same industry, firms can differ sharply in their global strategic profiles. For a paired example that takes us beyond behemoths from advanced countries, consider two of the leading IT services companies that develop software in India: Tata Consultancy Services, or TCS, and Cognizant Technology Solu-

tions. TCS, the largest such firm, started exporting software services from India more than 30 years ago and has long stressed arbitrage. Over the past four years, though, I have closely watched and even been involved in its development of a network delivery model to aggregate within and across regions. Cogni-

## What Are Your Globalization Options?

When managers first hear about the broad strategies (adaptation, aggregation, and arbitrage) that make up the AAA Triangle framework for globalization, their most common response by far is “Let’s do all three.” But it’s not that simple. A close look at the three strategies reveals the differences—and tensions—among them. Business leaders must figure out which elements will meet their companies’ needs and prioritize accordingly.

	ADAPTATION	AGGREGATION	ARBITRAGE
<b>Competitive Advantage</b> Why should we globalize at all?	To achieve local relevance through national focus while exploiting some economies of scale	To achieve scale and scope economies through international standardization	To achieve absolute economies through international specialization
<b>Configuration</b> Where should we locate operations overseas?	Mainly in foreign countries that are similar to the home base, to limit the effects of cultural, administrative, geographic, and economic distance		In a more diverse set of countries, to exploit some elements of distance
<b>Coordination</b> How should we connect international operations?	By country, with emphasis on achieving local presence within borders	By business, region, or customer, with emphasis on horizontal relationships for cross-border economies of scale	By function, with emphasis on vertical relationships, even across organizational boundaries
<b>Controls</b> What types of extremes should we watch for?	Excessive variety or complexity	Excessive standardization, with emphasis on scale	Narrowing spreads
<b>Change Blockers</b> Whom should we watch out for internally?	Entrenched country chiefs	All-powerful unit, regional, or account heads	Heads of key functions
<b>Corporate Diplomacy</b> How should we approach corporate diplomacy?	Address issues of concern, but proceed with discretion, given the emphasis on cultivating local presence	Avoid the appearance of homogenization or hegemonism (especially for U.S. companies); be sensitive to any backlash	Address the exploitation or displacement of suppliers, channels, or intermediaries, which are potentially most prone to political disruption
<b>Corporate Strategy</b> What strategic levers do we have?	Scope selection Variation Decentralization Partitioning Modularization Flexibility Partnership Recombination Innovation	Regions and other country groupings Product or business Function Platform Competence Client industry	Cultural (country-of-origin effects) Administrative (taxes, regulations, security) Geographic (distance, climate differences) Economic (differences in prices, resources, knowledge)

zant, the fourth largest, also started out with arbitrage and still considers that to be its main strategy but has begun to invest more heavily in adaptation to achieve local presence in the U.S. market in particular. (Although the company is headquartered in the United States, most of its software development centers and employees are in India.)

The AAA Triangle allows managers to see which of the three strategies—or which combination—is likely to afford the most leverage for their companies or in their industries overall. Expense items from businesses' income statements provide rough-and-ready proxies for the importance of each of the three A's. Companies that do a lot of advertising will need to adapt to the local market. Those that do a lot of R&D may want to aggregate to improve economies of scale, since many R&D outlays are fixed costs. For firms whose operations are labor intensive, arbitrage will be of particular concern because labor costs vary greatly from country to country. By calculating these three types of expenses as percentages of

sales, a company can get a picture of how intensely it is pursuing each course. Those that score in the top decile of companies along any of the three dimensions—advertising intensity, R&D intensity, or labor intensity—should be on alert. (See the exhibit “The AAA Triangle” for more detail on the framework.)

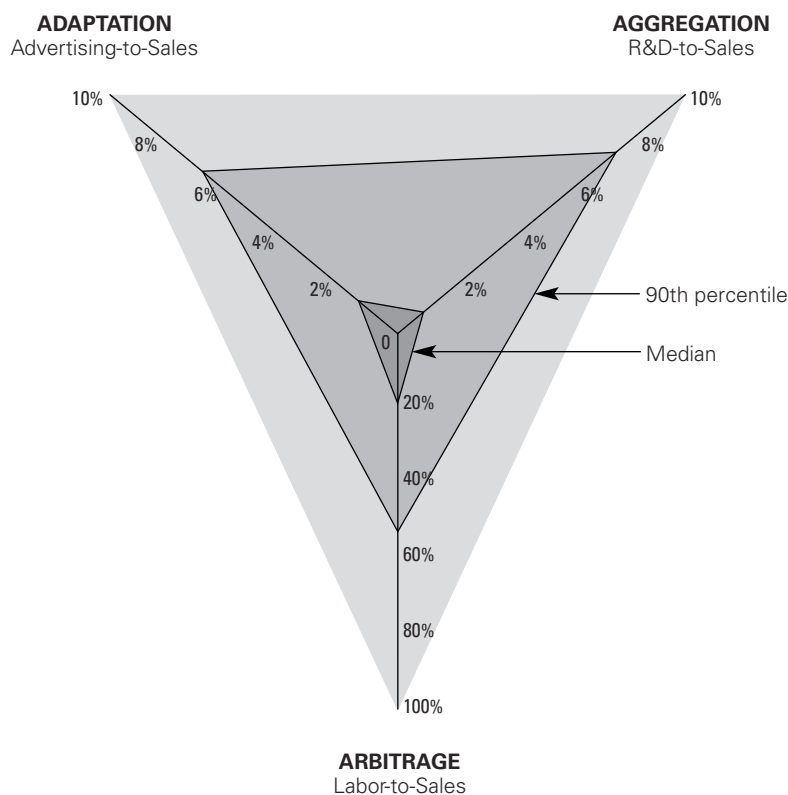
How do the companies I've already mentioned look when their expenditures are mapped on the AAA Triangle? At Procter & Gamble, businesses tend to cluster in the top quartile for advertising intensity, indicating the appropriateness of an adaptation strategy. TCS, Cognizant, and IBM Global Services are distinguished by their labor intensity, indicating arbitrage potential. But IBM Systems ranks significantly higher in R&D intensity than in labor intensity and, by implication, has greater potential for aggregation than for arbitrage.

### From A to AA

Although many companies will (and should) follow a strategy that involves the focused pursuit of just one of the three A's, some leading-

## The AAA Triangle

The AAA Triangle serves as a kind of strategy map for managers. The percentage of sales spent on advertising indicates how important adaptation is likely to be for the company; the percentage spent on R&D is a proxy for the importance of aggregation; and the percentage spent on labor helps gauge the importance of arbitrage. Managers should pay attention to any scores above the median because, most likely, those are areas that merit strategic focus. Scores above the 90th percentile may be perilous to ignore.



Median and top-decile scores are based on U.S. manufacturing data from Compustat's Global Vantage database and the U.S. Census Bureau. Since the ratios of advertising and R&D to sales rarely exceed 10%, those are given a maximum value of 10% in the chart.

*Even within the same industry, firms can differ sharply in their global strategic profiles.*

edge companies—IBM, P&G, TCS, and Cognizant among them—are attempting to perform two A's particularly well. Success in "AA strategies" takes two forms. In some cases, a company wins because it actually beats competitors along both dimensions at once. More commonly, however, a company wins because it manages the tensions between two A's better than its competitors do.

The pursuit of AA strategies requires considerable organizational and material innovation. Companies must do more than just allocate resources and monitor national operations from headquarters. They need to deploy a broad array of integrative devices, ranging from the hard (for instance, structures and systems) to the soft (for instance, style and socialization). Let's look at some examples.

**Adaptation and aggregation.** As I noted above, Procter & Gamble started out with an adaptation strategy. Halting attempts at aggregation across Europe, in particular, led to a drawn-out, function-by-function installation of a matrix structure throughout the 1980s, but the matrix proved unwieldy. So in 1999, the new CEO, Durk Jager, announced the reorganization mentioned earlier, whereby global business units (GBUs) retained ultimate profit responsibility but were complemented by geographic market development organizations (MDOs) that actually ran the sales force (shared across GBUs) and went to market.

The result? All hell broke loose in multiple areas, including at the key GBU/MDO interfaces. Jager departed after less than a year. Under his successor, Lafley, P&G has enjoyed much more success, with an approach that strikes more of a balance between adaptation and aggregation and allows room for differences across general business units and markets. Thus, its pharmaceuticals division, with distinct distribution channels, has been left out of the MDO structure; in emerging markets, where market development challenges loom large, profit responsibility continues to be vested with country managers. Also important are the company's decision grids, which are devised after months of negotiation. These define protocols for how different decisions are to be made, and by whom—the general business units or the market development organizations—while still generally reserving responsibility for profits (and the right to make decisions not covered by the grids) for the GBUs.

Common IT systems help with integration as well. This structure is animated by an elaborate cycle of reviews at multiple levels.

Such structures and systems are supplemented with other, softer tools, which promote mutual understanding and collaboration. Thus, the GBUs' regional headquarters are often collocated with the headquarters of regional MDOs. Promotion to the director level or beyond generally requires experience on both the GBU and the MDO sides of the house. The implied crisscrossing of career paths reinforces the message that people within the two realms are equal citizens. As another safeguard against the MDOs' feeling marginalized by a lack of profit responsibility, P&G created a structure—initially anchored by the vice chairman of global operations, Robert McDonald—to focus on their perspectives and concerns.

**Aggregation and arbitrage.** In contrast to Procter & Gamble, TCS is targeting a balance between aggregation and arbitrage. To obtain the benefits of aggregation without losing its traditional arbitrage-based competitive advantage, it has placed great emphasis on its global network delivery model, which aims to build a coherent delivery structure that consists of three kinds of software development centers:

- The global centers serve large customers and have breadth and depth of skill, very high scales, and mature coding and quality control processes. These centers are located in India, but some are under development in China, where TCS was the first Indian software firm to set up shop.
- The regional centers (such as those in Uruguay, Brazil, and Hungary) have medium scales, select capabilities, and an emphasis on addressing language and cultural challenges. These centers offer some arbitrage economies, although not yet as sizable as those created by the global centers in India.
- The nearshore centers (such as those in Boston and Phoenix) have small scales and focus on building customer comfort through proximity.

In addition to helping improve TCS's economics in a number of ways, a coherent global delivery structure also seems to hold potential for significant international revenue gains. For example, in September 2005, TCS announced the signing of a five-year, multinational contract with the Dutch bank ABN AMRO that's



expected to generate more than 200 million. IBM won a much bigger deal from ABN AMRO, but TCS's deal did represent the largest such contract ever for an Indian software firm and is regarded by the company's management as a breakthrough in its attempts to compete with IBM Global Services and Accenture. According to CEO S. Ramadorai, TCS managed to beat out its Indian competitors, including one that was already established at ABN AMRO, largely because it was the only Indian vendor positioned to deploy several hundred professionals to meet the application development and maintenance needs of ABN AMRO's Brazilian operations.

**Arbitrage and adaptation.** Cognizant has taken another approach and emphasized arbitrage and adaptation by investing heavily in a local presence in its key market, the United States, to the point where it can pass itself off as either Indian or U.S.-based, depending on the occasion.

Cognizant began life in 1994 as a captive of Dun & Bradstreet, with a more balanced distribution of power than purely Indian firms have. When Cognizant spun off from D&B a couple of years later, founder Kumar Mahadeva dealt with customers in the United States, while Lakshmi Narayanan (then COO, now vice chairman) oversaw delivery out of India. The company soon set up a two-in-a-box structure, in which there were always two global leads for each project—one in India and one in the United States—who were held jointly accountable and were compensated in the same way. Francisco D'Souza, Cognizant's CEO, recalls that it took two years to implement this structure and even longer to change mind-sets—at

a time when there were fewer than 600 employees (compared with more than 24,000 now). As the exhibit "Cognizant's AA Strategy" shows, two-in-a-box is just one element, albeit an important one, of a broad, cross-functional effort to get past what management sees as the key integration challenge in global offshoring: poor coordination between delivery and marketing that leads to "tossing stuff over the wall."

Not all of the innovations that enable AA strategies are structural. At the heart of IBM's recent arbitrage initiatives (which have been added to the company's aggregation strategy) is a sophisticated matching algorithm that can dynamically optimize people's assignments across all of IBM's locations—a critical capability because of the speed with which "hot" and "cold" skills can change. Krishna Nathan, the director of IBM's Zurich Research Lab, describes some of the reasons why such a people delivery model involves much more rocket science than, for example, a parts delivery model. First, a person's services usually can't be stored. Second, a person's functionality can't be summarized in the same standardized way as a part's, with a serial number and a description of technical characteristics. Third, in allocating people to teams, attention must be paid to personality and chemistry, which can make the team either more or less than the sum of its parts; not so with machines. Fourth, for that reason and others (employee development, for instance), assignment durations and sequencing are additionally constrained. Nathan describes the resultant assignment patterns as "75% global and 25% local." While this may be more aspirational than actual, it is clear that to

## Cognizant's AA Strategy

Cognizant is experimenting with changes in staffing, delivery, and marketing in its pursuit of a strategy that emphasizes both adaptation and arbitrage.

STAFFING	DELIVERY	MARKETING
<ul style="list-style-type: none"> <li>• Relatively stringent recruiting process</li> <li>• More MBAs and consultants</li> <li>• More non-Indians</li> <li>• Training programs in India for acculturation</li> </ul>	<ul style="list-style-type: none"> <li>• Two global leads—one in the U.S., one in India—for each project</li> <li>• All proposals done jointly (between India and the U.S.)</li> <li>• More proximity to customers</li> <li>• On-site kickoff teams</li> <li>• Intensive travel, use of technology</li> </ul>	<ul style="list-style-type: none"> <li>• Joint Indian–U.S. positioning</li> <li>• Use of U.S. nationals in key marketing positions</li> <li>• Very senior relationship managers</li> <li>• Focus on selling to a small number of large customers</li> </ul>



the extent such matching devices are being used more effectively for arbitrage, they represent a massive power shift in a company that has hitherto eschewed arbitrage.

### The Elusive Trifecta

There are serious constraints on the ability of any one organization to use all three A's simultaneously with great effectiveness. First, the complexity of doing so collides with limited managerial bandwidth. Second, many people think an organization should have only one culture, and that can get in the way of hitting multiple strategic targets. Third, capable competitors can force a company to choose which dimension it is going to try to beat them on. Finally, external relationships may have a focusing effect as well. For instance, several private-label manufacturers whose businesses were built around arbitrage have run into trouble because of their efforts to aggregate as well as arbitrage by building up their own brands in their customers' markets.

To even contemplate a AAA strategy, a company must be operating in an environment in which the tensions among adaptation, aggregation, and arbitrage are weak or can be overridden by large scale economies or structural advantages, or in which competitors are otherwise constrained.

Consider GE Healthcare (GEH). The diagnostic-imaging industry has been growing rapidly and has concentrated globally in the hands of three large firms, which together command an estimated 75% of revenues in the business worldwide: GEH, with 30%; Siemens Medical Solutions (SMS), with 25%; and Philips Medical Systems (PMS), with 20%.<sup>1</sup> This high degree of concentration is probably related to the fact that the industry ranks in the 90th percentile in terms of R&D intensity. R&D expenditures are greater than 10% of sales for the "big three" competitors and even higher for smaller rivals, many of whom face profit squeezes. All of this suggests that the aggregation-related challenge of building global scale has proven particularly important in the industry in recent years.

GEH, the largest of the three firms, has also consistently been the most profitable. This reflects its success at aggregation, as indicated by the following:

**Economies of scale.** GEH has higher total R&D spending than SMS or PMS, greater total

sales, and a larger service force (constituting half of GEH's total employee head count)—but its R&D-to-sales ratio is lower, its other expense ratios are comparable, and it has fewer major production sites.

**Acquisition capabilities.** Through experience, GEH has become more efficient at acquiring. It made nearly 100 acquisitions under Jeffrey Immelt (before he became GE's CEO); since then, it has continued to do a lot of acquiring, including the \$9.5 billion Amersham deal in 2004, which moved the company beyond metal boxes and into medicine.

**Economies of scope.** The company strives, through Amersham, to integrate its biochemistry skills with its traditional base of physics and engineering skills; it finances equipment purchases through GE Capital.

GEH has even more clearly outpaced its competitors through arbitrage. Under Immelt, but especially more recently, it has moved to become a global product company by migrating rapidly to low-cost production bases. Moves have been facilitated by a "pitcher-catcher" concept originally developed elsewhere in GE: A "pitching team" at the existing site works closely with a "catching team" at the new site until the latter's performance is at least as strong as the former's. By 2005, GEH was reportedly more than halfway to its goals of purchasing 50% of its materials directly from low-cost countries and locating 60% of its manufacturing in such countries.

In terms of adaptation, GEH has invested heavily in country-focused marketing organizations, coupling such investments relatively loosely with the integrated development-and-manufacturing back end, with objectives that one executive characterizes as being "more German than the Germans." It also boosts customer appeal with its emphasis on providing services as well as equipment—for example, by training radiologists and providing consulting advice on post-image processing. Such customer intimacy obviously has to be tailored by country. And recently, GEH has cautiously engaged in some "in China, for China" manufacture of stripped-down, cheaper equipment aimed at increasing penetration there.

GEH has managed to use the three A's to the extent that it has partly by separating the three and, paradoxically, by downplaying the pursuit of one of them: adaptation. This is one example of how companies can get around the prob-

lem of limited managerial bandwidth. Others range from outsourcing to the use of more market or marketlike mechanisms, such as internal markets. GEH's success has also depended on competitors' weaknesses. In addition to facing a variety of size-related and other structural disadvantages relative to GEH, SMS and particularly PMS have been slow in some respects—for instance, in shifting production to low-cost countries. For all these reasons, the temptation to treat the GEH example as an open invitation for everyone to pursue all three A's should be stubbornly resisted.

Besides, the jury is still out on GEH. Adapting to the exceptional requirements of potentially large but low-income markets such as China and India while trying to integrate globally is likely to be an ongoing tension for the company. What's more, GEH isn't clearly ahead on all performance dimensions: SMS

has focused more on core imaging, where it is seen as the technological leader.

### Developing a AAA Strategy

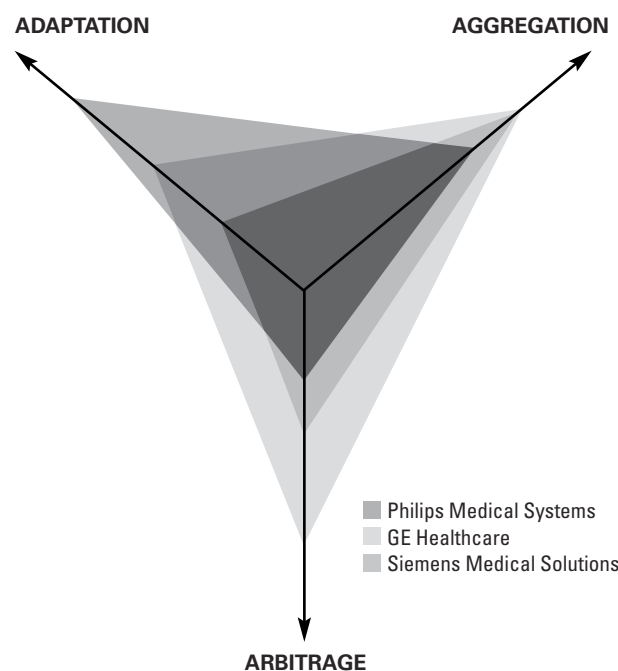
Let's now consider how a company might use the AAA Triangle to put together a globally competitive strategy. The example I'll use here will be PMS, the smallest of the big three diagnostic-imaging firms.

At a corporate level, Philips had long followed a highly decentralized strategy that concentrated significant power in the hands of country managers and emphasized adaptation. Under pressure from more aggregation-oriented Japanese competitors in areas such as consumer electronics, efforts began in the 1970s to transfer more power to and aggregate more around global product divisions. These were blocked by country chiefs until 1996, when the new CEO abolished the geographic leg of the geography-product matrix. It is sometimes suggested that Philips's traditional focus on adaptation has persisted and remains a source of competitive advantage. While that's true about the parent company, it isn't the case for PMS. Any adaptation advantage for PMS is limited by SMS's technological edge and GEH's service-quality edge. These can be seen as global attributes of the two competitors' offerings, but they also create customer lock-in at the local level.

More generally, any adaptation advantage at PMS is more than offset by its aggregation disadvantages. PMS's absolute R&D expenditures are one-third lower than those of GEH and one-quarter lower than those of SMS, and PMS is a much larger part of a much smaller corporation than its rivals are. (Philips's total acquisition war chest at the corporate level was recently reported to be not much larger than the amount that GEH put down for the Amer-sham acquisition alone.) In addition, PMS was stitched together out of six separate companies in a series of acquisitions made over three years to improve the original and aging X-ray technology. It is somewhat surprising that this attempt has worked as well as it has in a corporation without much acquisition experience to fall back on—but there have also clearly been negative aftereffects. Most dramatically, PMS paid more than €700 million in 2004 related to past acquisition attempts—one consummated, another considered—nearly wiping out its reported earnings for that year, although

### AAA Competitive Map for Diagnostic Imaging

Philips Medical Systems, the smallest of the big three diagnostic-imaging firms, historically emphasized adaptation but has recently placed some focus on aggregation. Siemens Medical Solutions emphasizes aggregation and uses some arbitrage. The most successful of the three, GE Healthcare, beats each of its rivals on two out of the three A's.



profitability did recover nicely in 2005.

PMS's preoccupation (until recently) with connecting its disparate parts is also somewhat to blame for the company's lack of progress on the arbitrage front. PMS has trailed not only its rivals but also other Philips divisions in moving manufacturing to low-cost areas, particularly China. Although Philips claims to be the largest Western multinational in China, PMS did not start a manufacturing joint venture there until September 2004, with the first output for the Chinese market becoming available in 2005 and the first supplies for export in 2006. Overall, PMS's sourcing levels from low-cost countries in 2005 were comparable to levels GEH achieved back in 2001, and they lagged SMS's as well.

Insights on positioning relative to the three A's can be pulled together into a single map, as shown in the exhibit "AAA Competitive Map for Diagnostic Imaging." Assessments along these lines, while always approximate, call attention to where competitors are actually located in strategy space; they also help companies visualize trade-offs across different A's. Both factors are important in thinking through where and where not to focus the organization's efforts.

How might this representation be used to articulate an action agenda for PMS? The two most obvious strategy alternatives for PMS are AA strategies: adaptation-aggregation and adaptation-arbitrage.

Adaptation-aggregation comes closest to the strategy currently in place. However, it is unlikely to solve the aggregation-related challenges facing PMS, so it had better offer some meaningful extras in terms of local responsiveness. PMS could also give up on the idea of creating a competitive advantage and simply be content with achieving average industry profitability, which is high: The big three diagnostic-imaging companies (which also account for another profitable global triopoly, in light bulbs) are described as "gentlemanly" in setting prices. Either way, imitation of bigger rivals' large-scale moves into entirely new areas seems likely to magnify, rather than minimize, this source of disadvantage. PMS does appear to be exercising some discipline in this regard, preferring to engage in joint ventures and other relatively small-scale moves rather than any Amersham-sized acquisitions.

The adaptation-arbitrage alternative would

aim not just at producing in low-cost locations but also at radically reengineering and simplifying the product to slash costs for large emerging markets in China, India, and so forth. However, this option does not fit with Philips's heritage, which is not one of competing through low costs. And PMS has less room to follow a strategy of this sort because of GEH's "in China, for China" product, which is supposed to cut costs by 50%. PMS, in contrast, is talking of cost reductions of 20% for its first line of Chinese offerings.

If PMS found neither of these alternatives appealing—and frankly, neither seems likely to lead to a competitive advantage for the company—it could try to change the game entirely. Although PMS seems stuck with structural disadvantages in core diagnostic imaging compared with GEH and SMS, it could look for related fields in which its adaptation profile might have more advantages and fewer disadvantages. In terms of the AAA Triangle, this would be best thought of as a lateral shift to a new area of business, where the organization would have more of a competitive advantage. PMS does seem to be attempting something along these lines—albeit slowly—with its recent emphasis on medical devices for people to use at home. As former Philips CFO Jan Hommen puts it, the company has an advantage here over both Siemens and GE: "With our consumer electronics and domestic appliances businesses, we have gained a lot of experience and knowledge." The flip side, though, is that PMS starts competing with large companies such as Johnson & Johnson. PMS's first product of this sort—launched in the United States and retailing for around \$1,500—is a home-use defibrillator. Note also that the resources emphasized in this strategy—that is, brand and distribution—operate at the local (national) level. So the new strategy can be seen as focusing on adaptation in a new market.

What do these strategic considerations imply for integration at PMS? The company needs to continue streamlining operations and speed up attempts at arbitrage, possibly considering tools such as the pitcher-catcher concept. It needs to think about geographic variation, probably at the regional level, given the variation in industry attractiveness as well as PMS's average market share across regions. Finally, it needs to enable its at-home devices business to tap Philips's consumer electronics division for

resources and capabilities. This last item is especially important because, in light of its track record thus far, PMS will have to make some early wins if it is to generate any excitement around a relaunch.

### Broader Lessons

The danger in discussions about integration is that they can float off into the realm of the ethereal. That's why I went into specifics about the integration challenges facing PMS—and it's why it seems like a good idea to wrap this article up by recapitulating the general points outlined.

**Focus on one or two of the A's.** While it is possible to make progress on all three A's—especially for a firm that is coming from behind—companies (or, often more to the point, businesses or divisions) usually have to focus on one or at most two A's in trying to build competitive advantage. Can your organization agree on what they are? It may have to shift its focus across the A's as the company's needs change. IBM is just one example of a general shift toward arbitrage. But the examples of IBM, P&G, and, in particular, PMS illustrate how long such shifts can take—and the importance, therefore, of looking ahead when deciding what to focus on.

**Make sure the new elements of a strategy are a good fit organizationally.** While this isn't a fixed rule, if your strategy does embody non-trivially new elements, you should pay particular attention to how well they work with other things the organization is doing. IBM has grown its staff in India much faster than other international competitors (such as Accenture) that have begun to emphasize India-based arbitrage. But quickly molding this workforce into an efficient organization with high delivery standards and a sense of connection to the parent company is a critical challenge: Failure in this regard might even be fatal to the arbitrage initiative.

**Employ multiple integration mechanisms.** Pursuit of more than one of the A's requires creativity and breadth in thinking about integration mechanisms. Given the stakes, these factors can't be left to chance. In addition to IBM's algorithm for matching people to opportunities, the company has demonstrated creativity in devising "deal hubs" to aggregate across its hardware, software, and services businesses. It has also reconsidered its previ-

ous assumption that global functional headquarters should be centralized (recently, IBM relocated its procurement office from Somers, New York, to Shenzhen, China). Of course, such creativity must be reinforced by organizational structures, systems, incentives, and norms conducive to integration, as at P&G. Also essential to making such integration work is an adequate supply of leaders and succession candidates of the right stripe.

**Think about externalizing integration.** Not all the integration that is required to add value across borders needs to occur within a single organization. IBM and other firms illustrate that some externalization is a key part of most ambitious global strategies. It takes a diversity of forms: joint ventures in advanced semiconductor research, development, and manufacturing; links to and support of Linux and other efforts at open innovation; (some) outsourcing of hardware to contract manufacturers and services to business partners; IBM's relationship with Lenovo in personal computers; customer relationships governed by memoranda of understanding rather than detailed contracts. Reflecting this increased range of possibilities, reported levels of international joint ventures are running only one-quarter as high as they were in the mid-1990s, even though more companies are externalizing operations. Externalization offers advantages not just for outsourcing non-core services but also for obtaining ideas from the outside for core areas: for instance, Procter & Gamble's connect-and-develop program, IBM's innovation jams, and TCS's investments in involving customers in quality measurement and improvement.

**Know when not to integrate.** Some integration is always a good idea, but that is not to say that more integration is always better. First of all, very tightly coupled systems are not particularly flexible. Second, domain selection—in other words, knowing what not to do as well as what to do—is usually considered an essential part of strategy. Third, even when many diverse activities are housed within one organization, keeping them apart may be a better overall approach than forcing them together in, say, the bear hug of a matrix structure. As Lafley explains, the reason P&G is able to pursue arbitrage up to a point as well as adaptation and aggregation is that the company has deliberately separated these functions into three kinds of subunits (global business units,

*Not all the integration that is required to add value across borders needs to occur within a single organization.*

market development organizations, and global business shared services) and imposed a structure that minimizes points of contact and, thereby, friction.

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For most of the past 25 years, the rhetoric of globalization has been concentrated on markets. Only recently has the spotlight turned to production, as firms have become aware of the arbitrage opportunities available through offshoring. This phenomenon appears to have outpaced strategic thinking about it. Many academic writings remain focused on the globalization (or nonglobalization) of markets. And only a tiny fraction of the many companies that engage in offshoring appear to think about it strategically: Only 1% of the respondents to a recent survey conducted by Arie Lewin at Duke University say that their company has a corporatewide strategy in this re-

gard. The AAA framework provides a basis for considering global strategies that encompasses all three effective responses to the large differences that arise at national borders. Clearer thinking about the full range of strategy options should broaden the perceived opportunities, sharpen strategic choices, and enhance global performance.

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1. Figures are for 2005. Otherwise, the account is largely based on Tarun Khanna and Elizabeth A. Raabe, "General Electric Healthcare, 2006" (HBS case no. 9-706-478); D. Quinn Mills and Julian Kurz, "Siemens Medical Solutions: Strategic Turnaround" (HBS case no. 9-703-494); and Pankaj Ghemawat, "Philips Medical Systems in 2005" (HBS case no. 9-706-488).

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# Managing Differences

The Central Challenge of Global Strategy

## Further Reading

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### ARTICLE

#### [The End of Corporate Imperialism](#)

by C.K. Prahalad and Kenneth Lieberthal

*Harvard Business Review*

December 2004

Product no. 8495

The authors describe the benefits of adaptation as a global strategy for emerging markets and offer guidelines for getting the most from this “A.” First, avoid the common error of offering your products only to emerging markets’ tiny segment of affluent buyers. There are much larger markets further down the socioeconomic pyramid. To best serve these consumers, understand how they define “value.” Chinese, for example, snapped up Philips Electronics’ video-CD player, deeming it a great two-for-one bargain—though there’s no Western market for the product.

Also, find out how local distribution systems work. They may not work the same way abroad as they do at home—and they may work differently in different countries or regions. For instance, in China, distribution is regulated by local and provincial governments. But in India, individual entrepreneurs control a national distribution system through long-standing arrangements with small-scale distributors and banks.

Consider how your overseas business units should operate as well. To illustrate, in markets with massive governmental interference, you’ll need to coordinate units so they comply with government priorities.

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