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Offshoring goes on the **offensive**

Cost cutting is only the first benefit.

John Hagel III

The big news at this year's International Consumer Electronics Show in Las Vegas was all of the plasma televisions, digital music players, and other crossover gadgets that Dell, Gateway, Hewlett-Packard, and other computer giants are using to challenge consumer electronics stalwarts such as Philips, Samsung, and Sony. Behind the trade show buzz, however, lies a bigger story—one that goes well beyond home entertainment.

That story tells how Dell and its fellow computer manufacturers, along with leading US companies in the financial-services and other industries, are using offshore partnerships to do more than just cut costs. Indeed, they are taking advantage of the distinctive skills and high performance offered by companies in Asia's developing economies¹ to enhance their own operating performance, to outsource vital business activities (such as the design of components), and to accelerate their entry into adjacent product markets. US computer companies, for example, are relying heavily on original-design manufacturers, primarily based in Taiwan, to storm the consumer electronics market. A leading US financial-services firm has transferred increasingly sophisticated aspects of its interactions with customers to eTelecare, a call-center provider based in the Philippines. The result has been greatly improved performance at lower cost.

¹To a lesser extent, this process is also playing out in other rapidly developing economies, such as those of Eastern Europe (including Russia), but Asia represents the primary focus of offshoring activity for US companies today.

While it is possible, and sometimes preferable, just to offshore key business activities, outsourcing them as well provides bigger opportunities for most companies. Offshore providers of outsourced services offer vital and sometimes distinctive skills that are available in developed countries only at much higher cost, if at all.

Lower costs, higher performance

To most executives in the United States and Europe, offshoring means cheaper wage rates for labor-intensive activities. These cost savings are real, but some Asian companies can also offer superior performance.

The Philippines' eTelecare, for example, serves an array of blue-chip US clients, including a leading computer company and a prominent financial-services company, both known for world-class customer service. It takes eTelecare, on average, 25 percent less time to handle incoming calls than it took its clients' own call centers or previous outsourcers, and the company also delivers higher levels of customer satisfaction. In an outbound telephone-marketing campaign for one client, eTelecare exceeded the sales performance of the client's in-house facility after only one week. By the fourth, it was generating three times as much sales revenue per hour and three times as many conversions from telephone calls to sales.

Similarly, in handling technical support for customers of a leading US electronics OEM, eTelecare's cost per resolution was almost 40 and 16 percent lower than that of the OEM in its own US and Indian call-center operations, respectively, and 30 percent lower than that of competing US outsourcing vendors.² At the same time, customer satisfaction levels exceeded expectations: in a survey, 99 percent of the OEM's customers said they were satisfied or very satisfied.

Asia's manufacturing operations also attain high levels of performance. By moving such operations from North America to China, one large US electronics company tripled its manufacturing productivity.³ Cycle times and defect rates fell.

A new model

Such outcomes reflect the ability of offshore companies to combine lower labor costs with distinctive skills. Low wages allow offshore companies to hire more middle managers, who can then devote more time to building the skills of their employees and to improving their processes than would be economical for most Western companies.

² Cost per resolution covers the cost of call-center operations, including all calls needed for each problem and the cost of all dispatches and redispaches related to the problem.

³ Measured both in units per line and in the number of surface-mount-technology components placed per unit of placement equipment.

More for your wage

Discussions of wage rate differentials between Asia, on the one hand, and the United States and Europe, on the other, tend to focus on less skilled jobs, but in the more skilled ones the differentials can be compelling as well. In electronics, the wage rate ratio between the United States and China for product engineers is about 10:1. For software developers, the ratio between the United States and India is about 8:1.

The implications are significant: cost savings continue to accrue the higher up on the skills ladder companies go with their offshore outsourcing. Another way of looking at this offshore advantage is to compare the absolute wage premium required to hire a college rather than a high-school graduate. The premium could run to from \$5 to \$15 an hour in the United States, compared with \$2 to \$4 an hour in the Philippines, so it is much more cost-effective to hire a college graduate there, even if the quality of education in the two countries isn't entirely equivalent.

Distinctive skills

Wage rate differentials generate cost savings, of course, but the really compelling gains come from pairing savings with top-flight skills. While it is true that only a few Asian countries offer enough English-speaking call-center representatives to deal with US customers, many other skills are more abundant in Asia than in the United States. China, for example, produces 350,000 graduate engineers every year, compared with 90,000 for US engineering schools. And most leading Indian IT-outsourcing firms operate at level five—the highest degree of expertise—of the IT service capability maturity model,⁴ whereas most internal IT departments in the United States operate at levels two or three.

Many skills of Asian companies are distinctive. Product engineers in China and Taiwan, for instance, are more focused on designing for production than are their US counterparts, who tend to emphasize features and product performance. In integrated-circuit design, product engineers in China and Taiwan concentrate on using system-on-a-chip methodologies⁵ to integrate more functions on a single chip and thereby cut costs, while their US counterparts focus on designing the next leading-edge chip.

China and Taiwan are also developing world-class design expertise in specific technologies. Some of the world's best designers of wireless chips and developers of wireless software are now based there, partly because China has emerged as the largest market for cellular telephones and the

⁴A standardized way of measuring the sophistication of software-development skills and processes.

⁵Combining in a single integrated circuit all of the electronic circuits and other elements needed for a given system, such as a mobile telephone.

country's consumers adopt new features enthusiastically. (See "China's market for mobile phones," in the current issue.) In the field of key electronics components, a Taiwanese company called Waffer Technology has developed a sophisticated thixomolding process technology to produce magnesium alloy casings for notebook computers. Its yield rates—90 to 95 percent—are well above the industry standard of 70 to 80 percent.

Taking advantage

The combination of low wages and a plentiful supply of skilled applicants makes it possible for Asian companies to use managerial practices very different from those generally found in developed economies.

Selective hiring. To begin with, the best offshore companies invest heavily to recruit the right staff because they can afford to be more selective: eTelecare, for example, employs a recruiting team of 30 that puts applicants

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through a rigorous seven-stage screening process. (An equivalent US call-center operation might have perhaps 4 people on such a team. A two-stage process—

a resume and a short interview—is typical in US call centers.) As a result, eTelecare extends offers to only 2 percent of its applicants but enjoys a 90 percent acceptance rate, compared with an average acceptance rate of 50 percent in US call centers.

More managers to staff. In the United States, high wages are a major reason for the understandable tendency of high-performing companies to strip out layers of middle management and to increase the operating span of the remaining managers, forcing them into administrative and supervisory roles. In Asia, by contrast, the ratio of managers to staff is much higher, so they can spend more time building the skills of employees.

To give an example, eTelecare maintains a ratio of one "team lead" (frontline manager) to eight customer service agents, compared with a ratio of 1:20 or more for similar US operations. The company invests heavily in formal training programs, which are reinforced by apprenticeship, coaching, and mentorship. Agents who handle complex mutual-fund advisory calls, for instance, take a 16-week training course leading to the NASD⁶ Series 7 examination for broker certification. By organizing employees into smaller teams that have more exposure to managers, the company can follow up with ad hoc coaching and detailed reviews of every agent's performance—

⁶National Association of Securities Dealers.

at least an hour a week for seasoned reps and more for newer ones. Agents at eTelecare enjoy an average pass rate of 81 percent on the NASD tests (recently, in fact, the pass rate has been 100 percent), compared with an average US pass rate of 59 percent.

The higher ratio of managers to workers also allows companies to pay greater attention to identifying and implementing process improvements that enhance their operational performance; at eTelecare no less than 10 percent of a team lead's time is spent in this way. The benefits are evident as soon as the company takes over a client's call center. One client, in its own operations, was used to an average handling time of about eight minutes. Within six months, eTelecare had reduced this to four and a half minutes by refining call-handling procedures; revising the order in which information was gathered and entered, with a view to minimizing the impact on performance; and altering computer screens to reduce the number of page changes required in most transactions.

The benefits of a high ratio of managers to staff are visible in offshore manufacturing operations too. Assembly line managers at one Chinese factory, for instance, worked closely with the staff to identify a novel way of reducing the time and cost of setting up surface-mount-technology placement equipment. By identifying and grouping products with similar attributes, the factory reduced throughput times and manufacturing costs significantly.

Beyond performance

Using the organizational model described here, offshore companies offer Western clients better levels of performance than they can get at home. But there are additional possibilities: clients can move up the skill ladder within specific operational arenas, expand offshore initiatives into adjacent higher-value activities, and launch strategies to attack adjacent product markets. While each of these opportunities is always available to any Western company looking to take advantage of them, in practice they materialize sequentially. Until companies have acquired the experience and expertise that come with expanding offshore initiatives into adjacent higher-value activities, it is both more risky and more challenging to expand those initiatives into new product markets.

Moving up the skill ladder in specific operations

Many US companies continue to believe that offshoring is viable only for very low-skilled customer support activities, but others have found that with experience they can move rapidly up the skill ladder. For example, eTelecare's financial-services client began by asking it to supply customer

support for stored-value cards,⁷ a task requiring relatively modest call-center skills. The superior performance of eTelecare soon persuaded the client to give it responsibility for traveler's checks, which make greater demands on call-center agents: customers who have lost checks in foreign countries are usually stressed, and agents must use discretion and initiative, since they might be called upon to wire up to \$50,000 in funds to a customer or to initiate arrest procedures with local police for the fraudulent use of checks. This client has now entrusted eTelecare with the call-center work for mutual-fund products, an assignment that requires sophisticated financial skills.



Expanding into adjacent activities . . .

Companies—particularly businesses whose product costs are largely manufacturing-related—can also realize greater value by expanding their offshoring initiatives into adjacent higher-value activities. Consider the experience of the computer industry, which was among the first to take advantage of offshore manufacturing opportunities.

US computer OEMs began by moving relatively unskilled assembly operations offshore, often farming them out to electronics-manufacturing services, such as Celestica, Flextronics, and

Solectron. Increasingly, these OEMs have come to rely on offshore companies to provide related services in product design, sourcing, and inventory management. This movement has given rise to a new category of offshore operator: the mostly Taiwan-based original-design manufacturers, which take over design as well as manufacturing for leading computer OEMs. Even the top five original-design manufacturers—Asustek Computer, BenQ, Compal Electronics, Hon Hai Precision Industry, and Quanta Computer—are far less well-known than the electronics-manufacturing services.

After initially targeting low-end commodity products, the original-design manufacturers have steadily upgraded their technological capabilities and expanded their operations into more sophisticated computer product categories. They offer Western companies not just savings on labor but also faster cycle times, lower components costs, tighter inventory management, and more adaptive supply chains. Although original-design manufacturers still design products based on specifications supplied

⁷The consumer places a given amount of value on such a card and then uses it to make purchases, thereby depleting the value stored until the card must be refilled.

by OEMs, they increasingly design and sell their own products as well, capitalizing on growing investments in R&D. As a result, in 2004 the top five computer original-design manufacturers are expected to grow by an average of 34 percent, compared with 3 percent average annual growth for the five leading electronics-manufacturing service companies.⁸

Companies that offshore product design might also benefit by offshoring the specification and sourcing of components. Employees of offshore manufacturing operations are often in a better position to evaluate the availability and responsiveness of suppliers, particularly where robust local “ecosystems” of technology are developing. If these functions go abroad, it makes sense to shift responsibility for supply chain management as well, since the ability to compress cycle times, optimize manufacturing operations, and cut inventory investment depends on the effective coordination of activities across the supply chain. Indeed, Salomon Smith Barney estimates that because the top five computer original-design manufacturers have full responsibility for sourcing and supply chain management, their inventory turns are 35 percent faster than those of the top five electronics-manufacturing service vendors. In industries such as computers, where prices fall rapidly and the frequent introduction of new products increases the risk of obsolescence, tight inventory management can be especially valuable. The same compelling economics and capability-building opportunities are beginning to drive similar movements in other manufacturing businesses, including apparel, automotive products, cellular handsets, consumer electronics, and medical equipment.

. . . and adjacent markets

Offshoring can also provide opportunities to expand into new product markets. Consider the way computer manufacturers are making forays into consumer electronics. Gateway has rapidly established leadership in the US plasma television market. Hewlett-Packard has carved out a 6 percent market share in digital cameras, despite stiff competition from market leaders Canon and Nikon. Dell is targeting televisions and smart phones. All of these OEMs are using their knowledge of and relationships with Asian original-design manufacturers (which had earlier helped them design and manufacture computers and peripherals) to mitigate the risks of entering what were once, for them, inaccessible consumer electronics markets. In general, it is difficult to exploit offshore outsourcing in new product markets unless a company has the experience and relationships earned by outsourcing higher-skill activities in its own traditional product areas.

⁸The computer original-design manufacturers also achieve high returns on equity. According to Salomon Smith Barney, the top five enjoyed an average return on equity of 18 percent in 2002, compared with a negative average ROE of 26 percent for the top five electronics-manufacturing service vendors.

OEMs looking to expand their range into new product markets typically turn to original-design manufacturers to provide the design and technology expertise they themselves lack. An original-design manufacturer might also make or assemble key components or even outsource their manufacture or assembly within its own ecosystem. Usually, there is no joint venture or other form of equity participation—simply a contractual relationship.

The OEM—after compensating for whatever skills or expertise it lacked and thus overcoming the barriers that prevented it from entering a particular product market—uses its own brand, marketing expertise, and channel and customer relationships to sell the product. In practice, the process is collaborative. Although original-design manufacturers have been known to make the first approach to Western companies, the OEM typically brings a high-level product specification to the original-design manufacturer, and the design is then refined jointly.

Hewlett-Packard provides one example of a US company that works with original-design manufacturers to gain the ability to compete, in this case with established Japanese camera companies holding significant technology

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advantages in key components such as lenses and charge-coupled-device sensors. HP has expanded its relationships with digital-original-design manufacturers in Taiwan—

collaborating, for example, with Tekom Technologies to build on that company’s pioneering position in personal-computer cameras and to deepen Tekom’s capabilities in higher-performance digital cameras.

Why, it might be asked, doesn’t Tekom enter the US market itself, as other Asian companies have done or may do soon? (The Chinese manufacturer Haier Group, for example, sells appliances in the United States, and other manufacturers too are said to be considering entry into the US market.) The answer is that few if any original-design manufacturers have the consumer knowledge and marketing expertise they need for success in developed markets.⁹

Offshoring, however, is a dynamic rather than static opportunity. Just as US companies would be narrow-minded to think that Asian companies can handle only low-skilled business activities, so too they would be foolish to believe that these same companies will never develop the marketing

⁹For a more complete discussion of the ability of Asian companies to become branded players in these markets, see Paul Gao, Jonathan R. Woetzel, and Yibing Wu, “Can Chinese brands make it abroad?” The McKinsey Quarterly, 2003 special edition: Global directions, pp. 54–65 (www.mckinseyquarterly.com/links/8907).

expertise needed for success in developed markets. Some Western companies might feel sufficiently threatened by that possibility and avoid working with original-design manufacturers altogether. Others, though, will be more confident of their ability to maintain a competitive advantage in developed markets even if they move key design and technology elements to Asia.

Early moves by US computer manufacturers suggest potential attacker strategies for companies in any industry characterized by labor-intensive operations, the increasing use and importance of digital components in products, or both. While some types of businesses aren't suitable for offshoring—including service companies that require face-to-face contact and companies in which the high weight or volume of products relative to their value makes shipping costs prohibitive—many others are.

Offshore outsourcing provides US and European companies with opportunities bigger than merely sending low-value, labor-intensive activities abroad. While the operating savings are real, offshore companies can also deliver superior performance—even in highly skilled activities—and a better platform for entering new product markets. **Q**

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