Medical Product OUTSOURCING

Manufacturing Without Borders

Costa Rica Continues to Gain Ground as Latin America's Next Big Manufacturing Hub

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Austin, TX-based ArthroCare, which develops, manufactures and markets minimally invasive surgical devices, recently moved the majority of its manufacturing to Costa Rica. In addition to the assembly and inspection of arthroscopy devices (shown above), the company also manufactures devices used in spine and neurology; ear, nose and throat; cosmetic; urology; gynecology; and laparoscopy/general surgery.

In his recent bestseller, The World is Flat, author and *New York Times* columnist Thomas Friedman discusses the many and varied economic and social shifts that have led to a leveling between industrial and emerging-market countries. Among his list of "flatteners" he highlights the rise of outsourcing, offshoring and international supply chains.

These are familiar themes for medical device companies and their suppliers. For a number of years, medical technology manufacturers have looked to Latin America to help reduce manufacturing costs and stay competitive in a global marketplace

It's not news that Mexico, Puerto Rico and Costa Rica quickly emerged as the hot spots for their "nearshoring" operations. In addition to their proximity to the United States, the list of pluses these areas offer includes inexpensive but well-trained labor, reduced freight costs, favorable trade environments, fewer intellectual property concerns than manufacturing in Asia and, in the case of Mexico and Costa Rica, stable pro-business governments.

Austin, TX-based ArthroCare, which develops, manufactures and markets minimally invasive surgical devices, recently moved the majority of its manufacturing to Costa Rica. In addition to the assembly and inspection of arthroscopy devices (shown above), the company also manufactures devices used in spine and neurology; ear, nose and throat; cosmetic; urology; gynecology; and laparoscopy/general surgery.

"If you have a product that requires a large internal market, then China is the place to be," said John O'Brien, president of O'Brien Consulting in Lyons, CO. "If you're manufacturing for export, I think Latin America is the place to be."

O'Brien's firm helps medical device and other high-tech businesses set up manufacturing operations in Latin America. He previously was part owner, chairman and executive vice president of Point Technologies, Inc., a full-service medical device contract manufacturer with operations in Costa Rica.

While growth in the number of device firms moving or creating facilities in Puerto Rico has tapered off a little as a result of decreased tax incentives, Mexico and Costa Rica continue to see their link to medtech increase, according to many of the experts who spoke with *MPO*. Other emerging growth areas include Nicaragua and the Dominican Republic. Economic development groups in those countries have ratcheted up their efforts to attract biotech investment, including medical devices.

CINDE, Costa Rica's investment board, is one group that has zeroed in on the medical device sector with a division that promotes foreign direct investment in the industry. The country has been successful with its broader high-tech outreach as well. For example, microchip giant Intel has been manufacturing microchips in Costa Rica since 1998 and recently launched a software division there.

Costa Rica: Impressive Growth

At present, 22 medical device companies have manufacturing facilities in Costa Rica, according to CINDE. OEMs with plants in the country include ArthroCare, Baxter (in 1987, the first company to set up operations), Boston Scientific, Cytyc and INAMED, a division of Allergan Medical.

"Companies' expectations have been exceeded," claimed Jorge Vargas, investment manager for CINDE's medical branch. "As a result, companies have expanded operations, adding new lines and more complex processes. Reinvestment in medical devices accounts for 77% of the total foreign direct investment in medical devices."

Enrique Arguelles, general manager of Precision Concepts Costa Rica, said a pro-business government has made it easier for companies to set up shop.

"We have been in Costa Rica since 1992 [the company's US headquarters is in Winston-Salem, NC], and there are significant changes in the government approach to bringing new business into the country," he said. "The amount of paperwork, time and effort has been reduced tremendously."

In fact, the country has been so aggressive and successful in attracting foreign medical device dollars that investment has grown a staggering 655% between 2000 and 2006, according to Vargas. Exports have grown more than 300% in the last six years, and employment generated by medical device companies has averaged recent annual growth of 130%, he said. The country also extends significant tax and import incentives to companies, including 100% tax breaks on raw material and equipment importation. There's even 100% income tax exemption for up to eight years.

One of the contract manufacturers that has positioned itself to capitalize on this market potential is The MedTech Group, headquartered in

South Plainfield, NJ. Gil Reich, vice president of sales and marketing, told MPO that the extension of its business through a new additional facility in Costa Rica was a strategic move.

“The OEM presence there is growing,” Reich explained. “Years from now, when the market grows as we expect it to, we will benefit.”

Reich said his company explored other locations including Mexico and the Dominican Republic before settling on Costa Rica. The MedTech Group already had some experience in the Latin American market with a plant in Puerto Rico, which it opened in 1990. The Costa Rica facility began operations in 2004 and has since expanded to 25,000 square feet, housing cleanroom medical injection molding and device manufacturing.

Another company that is adding to Costa Rica’s base of device industry suppliers is ATEK Medical, based in Grand Rapids, MI. ATEK is in the process of opening its first overseas operation.
Dave Mabie, ATEK’s vice president of business development, said the decision to branch into Costa Rica came after his company began to realize the need for a lower-cost manufacturing option for its medical device customers.

“While our burdened labor rate in Michigan is attractive compared to the various regions around the country where medical device OEMs are centralized [eg, Northern California and Massachusetts], we can obviously drive the landed cost of finished devices down even further by taking our manufacturing to an offshore location,” Mabie said.

As with The MedTech Group, ATEK also considered manufacturing in Mexico or the Dominican Republic. Mabie said multiple trips were made to each country to perform due diligence on such matters as labor rates, turnover, education, logistics, supply base and economic stability. After the facility opens in the second quarter of this year, it will manufacture Class II single-use and electro-disposable devices, as well as Class III devices.

“The obvious trend in Costa Rica is the rate at which medical device OEMs are either moving manufacturing plants there or expanding their existing plants to handle added capacity,” Mabie said.

“With the demand we’re seeing, we’re anticipating the very real need for our own plant expansion in Costa Rica.”

A key factor that sets Costa Rica apart is an able and well-trained workforce. O’Brien said Costa Rica has “the right attitude,” adding “there’s a great, positive work ethic, from government and universities, to employees at all levels.”

Costa Rica has a strong education system, with a literacy rate of 95.8%, according to CINDE. Costa Rica disbanded its armed forces in 1949, and resources originally used for military purposes were redirected toward education and health.

Mexico: Still the One

Despite Costa Rica’s impressive gains and progressive infrastructure, Mexico—one of the world’s first low-cost manufacturing centers—remains a medical device manufacturing powerhouse.

Year to date by November 2006, according to the US Census Bureau’s foreign trade statistics, Mexico exported a little more than $2 billion in advanced life-sciences technology products to the United States. Imports in the same category were valued at $490 million. These figures led the rest of Latin America.

Steve Colantuoni, director of market research and communications for The Offshore Group in Tucson, AZ, said he has witnessed the progression of increasingly technical manufacturing in Mexico during the last 20 years.

“The Offshore Group has been operating in Mexico since 1986. Since that time, products of greater complexity are increasingly being produced there,” he said. “As the workforce has attained higher skill levels, more engineering content is added in Mexico, and quality has become world-class.”

The Offshore Group is one of the 10 largest maquiladora organizations in Mexico. Maquiladoras are corporations that assemble imported components for export to other countries. Nearly 3,000 of them operate in Mexico, most of them close to the US border.

Colantuoni said his company has experienced 41% growth in the last three years, expanding from 31 companies in 2003 to 53 today. Some of the products being produced in the Offshore Group’s industrial parks include cardiopulmonary vascular cannulae, ceramic capacitors for medical device applications, urologist instrumentation, wire harnesses for ultrasound machinery and anastomotic devices.

Mark Cohen, director of sales, healthcare, for The Tech Group, a custom injection molder and contract manufacturer based in Scottsdale, AZ, with an additional facility over the border, said Mexico certainly had “upgraded its image” by taking on higher-tech manufacturing.

“When we approach current and potential customers about going to Mexico with high-tech products, they’re not as skittish as they were five or 10 years ago,” Cohen said, though he added a caveat. “Our customers aren’t manufacturing their new product launches in Mexico, but mature products they have no problem taking down there.”

The Tech Group’s facility is located northwest of Mexico City in Guadalajara, which Cohen described as the “Silicone Valley” of Mexico. “There’s much lower job turnover there than some companies have at the border,” he explained.

Colantuoni also said Mexico’s interior offers a more stable and productive workforce than is found in border areas, which are plagued by greater turnover and frequent absenteeism. He added that the border area also has become increasingly expensive.

“Firms doing simple disposables, for instance, have come under increasing pressure to move operations to the interior to maintain profit margins,” Colantuoni said, though overall cost is still attractive. “Last year, the average operating cost per hour—all Mexican costs—for our medical device and medical-related clients was $7.02. This is less than the hourly wage paid to workers in the US before benefits.”

The Tech Group's Cohen had high praise for the ability of Mexico's workforce.

"Continuous improvement programs are as good, if not better, than here in the United States," he said. "It has been our experience that once our employees get the hang of something, they will continually make adjustments to the product and the process to optimize it."

Colantuoni predicted that as skyrocketing healthcare costs continue to draw ire and frustration in the United States, manufacturers would continue to turn to Mexico as a dependable low-cost option.
"Pressure to keep medical costs under control will see more production being shipped to lower-cost countries, and Mexico will be one of the principal recipients of this work," he said.

One recent example of such a move is Mentor, OH-based STERIS Corp. The manufacturer of infection prevention and decontamination systems announced last year that it would move the manufacturing portion of its Erie, PA operations to Mexico.

The company said it anticipated pre-tax savings of about $20 million annually in the first full fiscal year after the transfer is completed this summer.

"The decision to transfer manufacturing activities from Erie to Mexico was a difficult one. However, the reality is that our core healthcare customers are under significant pressure to reduce costs and we are experiencing new global competition from lower-cost suppliers," Les Vinney, president and CEO, said in a company-issued statement.

Room for Improvement

It's clear that OEMs and contract manufacturers benefit from the many pros that manufacturing in areas such as Mexico and Costa Rica have to offer. But what are some of the cons?

Low labor costs, educated workforce and proximity to the United States may spell fiesta time for manufacturers, but some drawbacks—or at least learning curves—remain for companies that choose to open facilities in Latin America.

"There's still a lot of governmental bureaucracy in many Latin American countries," said Cohen. "Many times, the local supply base—the infrastructure—for the types of products we manufacture isn't where it should be. And there's still language and cultural differences that must be learned. If you have stateside management that's not used to it, that can be a stumbling block. Has it decreased? Sure. But it's still there."

Mabie agreed that finding local supply for manufacturing was a challenge. "Probably the biggest drawback for any of the countries we considered is the lack of local supply," he said. "These are still developing economies and most of the components we will require for device manufacturing are not available locally. They need to be freighted in from the US."

For example, despite its high-tech focus, industry support and government backing, Costa Rica is still a developing country with the infrastructure to match.

"Ports need to be modernized and the road system needs to be improved," Arguelles explained.
O'Brien said that for all the labor advantages, one long-term risk factor actually could be a finite labor pool at middle- and upper-management levels, particularly in smaller companies within Costa Rica.

"It's not uncommon to have a dozen candidates for general manager who have both MBAs and engineering degrees," he explained. "But as more companies move in, there will be a greater demand for those kinds of people—general management, engineering and quality personnel. These people are there now, but the finite labor pool could rear its ugly head."

Concerns about financial stability in the region also will give companies considering a move south of the border pause. Countries such as Chile and Costa Rica have had relatively stable economic environments. Others have been more volatile. Argentina, Brazil, Bolivia, Venezuela—and even Mexico—have experienced turbulent market swings in the recent past.

In addition, a recent political shift to the far left for some Latin American governments has raised eyebrows in the United States.

Hugo Chavez, the president of Venezuela, a vocal critic of the United States, has taken actions to nationalize the country's foreign oil, electric and communications industries, in a move toward a completely socialist state.

In 2006, the voters in Nicaragua returned former Marxist president Daniel Ortega to the presidency.
"Despite the fact that Ortega is back in power, he promised the business community—at least before he was elected—that he would be pro-business," O'Brien said.

Chile recently elected the first socialist to serve as president since Salvador Allende was removed in a military coup in 1973. Michelle Bachelet, a physician and a former secretary of defense, is also Chile's first female head of state.

"Chile's basic economic model really is the same as it was 10 years ago," O'Brien said. "Bachelet's move to the left really is more on the social side than the business side. I think they are going to be very supportive of business. They are pushing high-tech, to a certain extent medical device, but not as specifically as Costa Rica. Chile knows what prosperity is and they won't want to change that."

To Boldly Go …

Shifting political tides aside, Command Medical Products, based in Ormond Beach, FL, is charting new territory as one of the first medical device manufacturers to establish a presence in Nicaragua. Until recently, the major areas of manufacturing activity in the country had been textiles and cut-and-sew operations. According to a recent article in Business 2.0 magazine, an influx of foreign investment in Nicaragua "is helping to pull the country out of its war-torn past."

Similar to other development efforts in the region, the country launched ProNicaragua, a not-for-profit, public-private investment promotion agency in 2002.

Command Medical, a manufacturer of disposable medical devices, opened its plant in mid-2005 to move high-volume, high-labor assembly and packaging operations from its Ormond Beach facility.
“This allows us to provide exceptionally competitive pricing for these types of medical assemblies,” said David Slick, Sr., founder and CEO of Command Medical. “The experience has been extremely positive. The quality and stability of the workforce allows us to produce quality medical devices at extremely competitive rates.”

While traveling to Nicaragua for family visits, Slick said he watched as the economy and infrastructure continued to grow. When the company began its search for an offshore manufacturing site, Slick found the free trade zone benefits, low labor costs, dependable labor pool and local government incentives favorable.

“The largest drawback we have encountered is the general public’s unfamiliarity with the region,” Slick said. “Our expectation is that the medical device industry will continue to look for higher quality, low-price manufacturing options and that Central America is an ideal partner for this endeavor.”