U.S. Firms Pursue Opportunities to Supply China's Growing Medical Device Market

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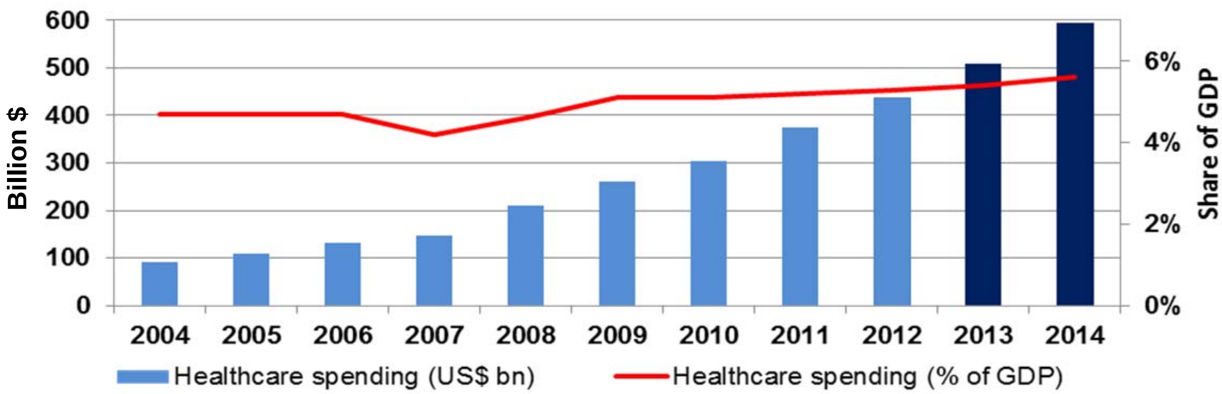
Summary: *China's medical device market is rapidly growing in response to the country's aging population, urbanization, and rising incidence of lifestyle-related illnesses. The Chinese government has increased healthcare sector spending by nearly $230 billion over the past four years, with much of this spending being directed towards medical device purchases. U.S. firms have responded accordingly; during 2008–12, U.S. exports to China of medical devices rose by 130% to $2.3 billion. The United States is now the largest medical device exporter to China. In addition to supplying the Chinese market via exports, many of the leading U.S. medical device manufacturers have set up medical device research labs in China, built factories, acquired local producers, and forged partnerships with local universities in an effort to further penetrate the burgeoning Chinese market.*

Drivers of China's Medical Device Market Growth

• Medical device demand in China has increased dramatically in recent years and is forecast to achieve a compound annual growth rate of 11% through 2018.[1] China's rapidly aging population, increasing urbanization, and associated emergence of lifestyle-related illnesses—such as lung cancer and heart disease—are driving consumer demand for imaging equipment, orthopedic implants, and cardiovascular devices in particular. The Chinese government has increased overall healthcare spending following reforms unveiled in 2009; much of this money is directed towards supplying local hospitals with high-quality medical equipment (such as color ultrasounds) which are largely manufactured in the United States (figure 1).

Figure 1 China's healthcare sector spending more than doubled during 2008–12, reaching $436 billion in 2012, with further growth forecast during 2013–14.



Source: EIU, "China Healthcare and Pharmaceuticals Report," March 4, 2013; December 2, 2011; July 2008.

• Annual orthopedic procedures in China are forecast to increase by 18% through 2015, with many of the major orthopedic segments expected to achieve double-digit growth. For instance, joint replacements are expected to grow 17% annually to 455,000 procedures by 2015, while fracture management procedures are expected to expand by 25%, reaching 1 million procedures over the next two years.[2] These forecasts reflect, in part, China's ageing population; by 2050, nearly one-third of the population will be over 60 years old. Elderly populations tend to require orthopedic devices due to degradations of the musculoskeletal system that are associated with ageing.

• Coronary artery disease afflicts over 20 million people in China, fueling demand for high-end interventional cardiovascular devices, especially coronary stents—tubes that are inserted into blood vessels once arterial blockages have been removed. Official estimates suggest that the country has performed the world's second-highest number of these procedures in recent years, after the United States. Increased consumption of high-caloric, processed foods and the prevalence of cigarette smoking throughout the country have been significant contributors to the increase in cardiovascular disease.

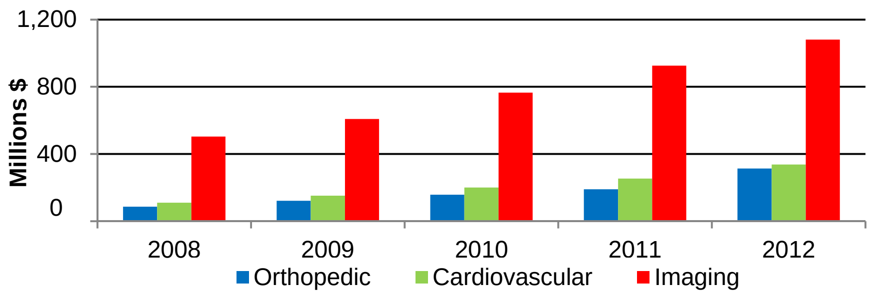
[1] GBI, *Medical Devices Market in China*, November 2012.
[2] Seeking Alpha, "China Orthopedic," June 29, 2012.

• China currently produces too few medical devices to satisfy the growing domestic market. Local companies have more commonly manufactured consumables, hospital supplies, and other low-end devices, leaving the country largely dependent on foreign companies to supply mid-level to high-end goods. Examples include products used in various radiation therapies and expensive capital equipment, such as magnetic resonance imaging (MRI) devices. Further, non-implantable medical devices in the country are on average more than 25 years old.

U.S. Firms Pursue Market Opportunities

• The United States has the world's largest medical device industry, and 20 of the world's 30 largest medical device manufacturers are based here. These firms have been able to expand their share of the growing Chinese market through exports; during 2008–12, exports to China of orthopedic, cardiovascular, and imaging devices collectively rose by 150% to $1.7 billion (figure 2). During this time, the United States emerged as the top exporter of medical devices to China and presently supplies nearly one-third of the country's total import market for these goods.

Figure 2 U.S. exports of orthopedic, cardiovascular, and imaging devices to China grew in each of the past four years



Source: Compiled by USITC from U.S. Department of Commerce official statistics.

• Nearly one-quarter of the U.S. industry's export growth to China during 2008–12 was driven by China's high demand for three types of devices in particular: stents, ultrasound devices, and MRI devices. Together, imports from the U.S. of these three goods grew by 236% to $551 million over this four-year period.

• However, barriers to U.S. exports—including poor intellectual property protection and high tariffs on some high-end devices—may be limiting U.S. penetration of the market. To that end, many U.S. medical device manufacturers have entered the market directly; from 2008 to 2012, U.S. multinationals invested in at least 30 projects covering a broad range of activities, including establishing new manufacturing centers, building education and training facilities, and constructing research and development (R&D) labs. Recent examples include the following:

- In January 2013, Michigan-based Stryker Corporation—the world's largest orthopedic device manufacturer—acquired Trauson Holdings, China's leading producer of spinal products, for $764 million. The company has already established manufacturing facilities in Suzhou and created a learning center for orthopedics through the Chinese University in Hong Kong, which trained an estimated 1,500 surgeons over the previous decade.

- Minneapolis-based Medtronic completed its first acquisition of a Chinese company in September 2012, purchasing Kanghui Holdings, an orthopedic implant manufacturer, for $816 million. Medtronic, whose Chinese headquarters are in Shanghai, also opened an R&D center in that city in August 2012.

- As part of a $2 billion, three-year commitment made by General Electric in 2010 to expand medical device innovation in China, the company unveiled an $80 billion research center in Chengdu in May 2012. The facility is intended to design devices, including portable ultrasound technologies, specifically for China's rural healthcare sector.

Sources: ODT, "Continental Divide," and "BRIC by BRIC," n.d. (accessed May 18, 2013); *WSJ*, "Stryker Offers to Buy China Spine-Products Maker," January 17, 2013; InMedica, "China to Account for One Fifth of Global Ultrasound Revenue by 2016," August 14, 2012; APCO Worldwide, "Market Analysis Report: China's Medical Device and Healthcare IT Industries," November 2010; MPO, "Cardiologists Say Stents Are Overused in China," October 17, 2012; Gross, "Markets Show Growth Opportunities," June 2011; EIU, "China: Healthcare and Pharmaceuticals Report," March 4, 2013; U.S. Commercial Service, "Healthcare Technologies Resource Guide: A Reference for U.S. Exporters," 2012–13; Seeking Alpha, "China Orthopedic: Steered by Aging Demographics," June 29, 2012; MDDI, "The Medical Device Market in China," June 18, 2013; GBI Research, *Medical Devices Market in China to 2018*, Executive Summary, November 2012.