China's Changing Medtech Landscape, Part 1: Shifting Exports

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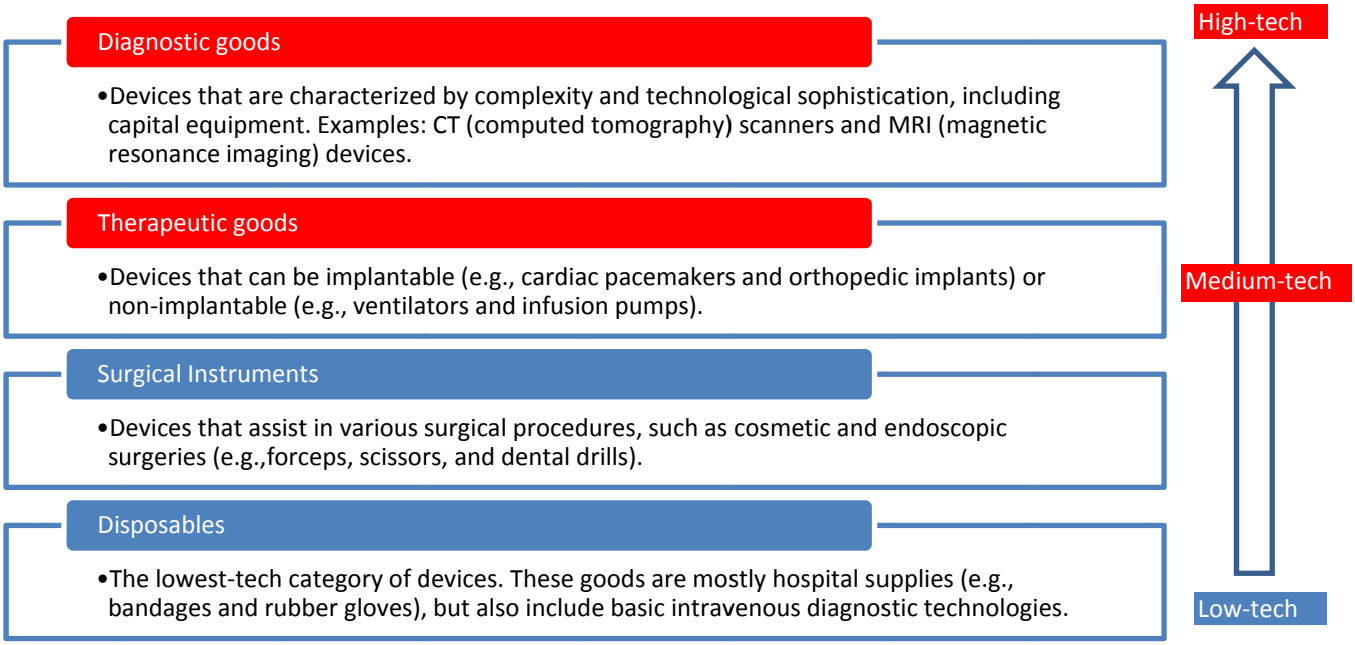
China's shifting medical technology (medtech) exports are the focus of this Executive Briefing on Trade (EBOT), the first of two. During the early years of the period 2001–16, China's medtech exports were largely low-tech, low-value goods. However, these exports gradually shifted towards medium-and-high-technology devices, mirroring changes in domestic demand. Since 2012, these devices have become China's leading medtech export categories. Two reasons for this trend are discussed in this EBOT. First, the country's large and growing healthcare market has created opportunities for local producers to supply all segments within the sector. Second, government policies have prioritized the local production of innovative medical devices.

Medical Device Production Segments

The medical device industry makes diverse products, ranging from simple, low-tech goods like bandages, to complex, high-tech capital equipment. Medical devices are divided into four major product groupings: disposables, surgical instruments, therapeutic goods, and diagnostic goods (figure 1).

Figure 1. Medical device categories and their relative technological complexity



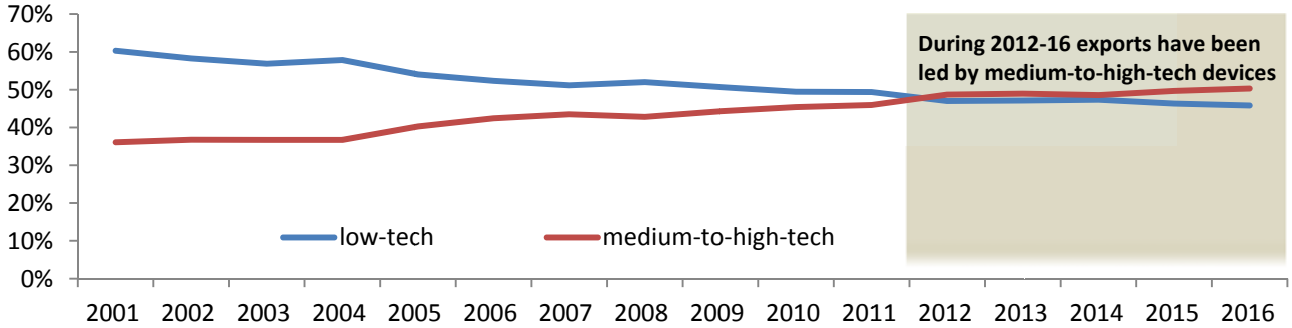
Source: Compiled from Bamber and Gereffi, *Costa Rica*, August 2013.
https://globalvaluechains.org/publication/costa-rica-medical-devices-global-value-chain-opportunities-upgrading

China's Changing Medtech Exports

For the first ten years of the period 2001–16, China's medtech exports were largely low-tech, low-value goods. During 2001–11, for example, disposables were China's largest category of medtech exports. However, during 2012–16 the composition of these exports shifted from low-tech towards predominantly medium-to high-tech devices (figure 2)[1]. This transition was largely driven by therapeutic devices, which have been China's largest medtech export category since 2012, and by diagnostic equipment, which registered the highest growth rate of any medtech category since 2001.

[1] Devices that could not be clearly identified as low-or high-tech were not included in figure 2; they accounted for less than 6 percent of China's total medtech exports in each of the years covered.

Figure 2. China's share of medtech exports have shifted from low-tech to medium-and-high-tech since 2012

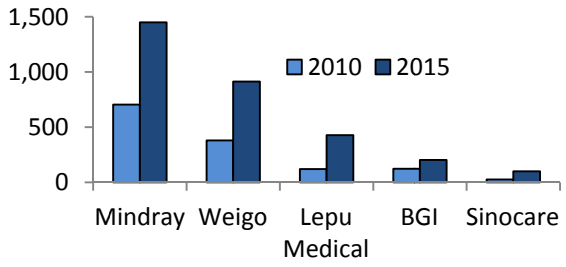


Source: Compiled by author from IHS Markit, Global Trade Atlas database (accessed October 12, 2017).
Note: These data were pulled from nearly 50 HS codes, the majority of which are found in chapter 90.

China's healthcare market growth spurs the domestic medtech industry

China's emergence as a global supplier of relatively high-tech medical devices reflects, in part, the increasing ability of local firms to supply the country's burgeoning market. As of 2016, China's healthcare market was valued at $53.6 billion (according to the U.S. Department of Commerce) and is now the world's third largest behind the United States and Japan. China's rapid urbanization, aging population, and rising incidence of lifestyle-related ailments has fueled demand for various high-end medical devices. Although foreign multinationals still hold a majority share[2] of China's high-end medical device market, a handful of indigenous producers have made substantial revenue gains in recent years (figure 3).

Figure 3. China's leading medtech firms have rapidly increased their revenues in recent years (million $)



Source: Compiled from Dora, "Medtech," March 2, 2017 http://www.bcg.com

Government policies support China's industry

During 2001–16, Chinese policies targeted improving the innovative and production capacity of local medical device firms. Each of the three five-year plans that China has unveiled over this period prioritized increasing the domestic production of various high-tech goods—including those produced by the medical device industry. Moreover, the second plan (2006–10) specifically listed boosting exports of its high-tech devices as a priority. Also, the "Made in China 2025" drive aims to supply 70 percent of China's domestic market with locally made high-tech devices by 2025. Domestic firms have benefitted as well from expedited regulatory approvals for devices deemed innovative; over 90 percent of the 117 approved devices are Chinese-produced. Another regulatory policy that has helped domestic producers is the recent requirement that manufacturers of medium-to-high-tech devices perform local clinical trials, regardless of the origin of the device. This policy represents an important departure from the former system (and the standard applied in the United States), which permitted firms that had conducted clinical trials in other countries to sell in China without undergoing additional, costly regulatory procedures.

Sources: ITA, "China-Medical Devices," July 25, 2017 ; Dora et al., "Medtech May Be," March 2, 2017; Luo et al., "Winning in China's," July 17, 2014; EIU, *Medtech in China*, 2017; Agarwal, et al., *MedTech in Asia,* December 2015, 22; China.org, "The 10th Five-Year Plan," n.d. (accessed November 11, 2017); Xinhua, "China plans," December 4, 2006; British Chamber of Commerce, "China's Twelfth," 2011; Xinhua, "China plans," December 4, 2006; Reuters, "China Calls," August 18, 2014.

[2] For most of this period, nearly half (47%) of planned investments into China's medtech sector were from U.S. companies according to fDI Intelligence. Most multinational activity in China is intended to serve the local market.