

EXECUTIVE INSIGHTS

Opportunity to Build a Billion-Dollar-Revenue MedTech Platform in India

At 11 billion US dollars, India is the fourth-largest MedTech market in the APAC region. Despite per capita spend being low compared to other APAC markets, positive news is that per capita healthcare spend in India has grown rapidly, especially in recent years. Compared to the present figure of US\$74, average healthcare spending per capita was US\$49 as recently as 2012, implying a CAGR of nearly 4%. Rising affordability and expanding insurance coverage are primary contributors to the growth in healthcare spending. IN addition, growth of the MedTech sector can further fuel growth in healthcare spending.

Rising affordability

Rising affordability for quality healthcare is driven by India's rising per capita disposable income, which reached US\$2,900 in 2023-24, growing by 8% in FY24 and 13.3% in FY23. In line with rising affordability, growth in India's household spend per capita at 7.8% Y-o-Y, is forecasted to outpace that of fellow developing Asian economies such as Indonesia, Philippines and Thailand.

Besides rising income, other factors contributing to rising affordability are a) large youth population — the median age in India is 29.8 years in 2024, as per The World Factbook, compared to 40.2 in China and 49.9 in Japan, and b) ongoing urbanization.



Rising insurance coverage

The proportion of India's population not covered by any form of health insurance has fallen considerably from 63% in FY2014-15 to 30% in FY2021-22. This has mainly been due to expanding health insurance, both public and private. Among government schemes, where population coverage has increased from 25% to 51% during the same period, Pradhan Mantri Jan Arogya Yojana (PM-JAY) has been a key contributor. With 550 million identification cards issued, it is the world's largest government-sponsored healthcare program. The latest government data shows that the scheme has facilitated 71 million hospitalizations. In a significant move, the Union Cabinet has approved expansion of the AB PM-JAY, ensuring all senior citizens aged 70 and above receive health coverage, regardless of income. Meanwhile, private health insurance coverage has also increased by 4%, registering a 23% CAGR over the past decade.

The growth in overall healthcare spending, driven by rising affordability and better insurance coverage, is expected to spill over into the Indian medical devices market and support in its expansion.

Primarily, a) increasing focus among Indian MedTech manufacturers on R&D and innovation to develop high quality products that meet market needs in both domestic and international markets, b) supportive MedTech manufacturing ecosystem, driven by supportive govt. policies, talent availability and infrastructure that has the capability and capacity to serve both Indian demand and international markets via exports, and c) capital infusion by public and private sector to aid companies to expand capacity, diversify portfolio and strengthen marketing efforts, have the potential to create multiple \$billion revenue MedTech companies in India.

We will touch upon each of these key points in detail in the sections below:

A. MedTech innovations

Overview of the MedTech market in India

The MedTech market in India can be divided into five broad categories:

- 1. Invitro diagnostics (IVD) that revolves around disease diagnosis and preventive care using human tissue / fluid sample
- **2.** Procedure-specific devices that are used for medical intervention specific to a therapeutic segment (e.g., cardiology, ophthalmology, dentistry, etc.)
- **3.** A wide range of non-procedure-specific devices that are used to perform surgeries and medical interventions across multiple therapeutic areas
- **4.** Imaging and monitoring devices designed either to visualize structures and organs within the body for diagnostic/therapeutic purposes or for patient monitoring
- **5.** General infrastructure and supplies that pertain to an extensive list of essential products used for the overall functioning of healthcare facilities, supporting routine and emergency medical care

Out of these, invitro diagnostics used by diagnostic laboratories, hospitals, research institutions, clinics, and POCT providers, is the largest and fastest-growing segment, followed by surgical instruments and consumables (see figure 1).

Figure 1:

Indian medical device market and growth expectations

2023, CAGR 2023-27F (USD millions)					Tot	al: ~\$11 Bn
2,357		2,284	2,467	1,576	751 First gid	1,500
Clinical chemistry	Staplers 28	Wound closure (adhesive medical dressing) 22 Anesthesia 33	Dental (capital) 29 Rhythm management implants 42	BP monitoring Nuclear/PET 31 Multi-parameter patient monitoring	boxes & kits 5 Wheel- chairs &	
Hematology 105	39 Blood d	Suturing material 54	Hearing instruments 56	ECG 61	accessories 52	
Diabetes care (CGM device) 185	61 Robotic surgery 78 Sutures/tubular needles 108 Ostomy 108		Neuromodulation devices 69 Bracing	Endoscopes 64	S&D equipment 70 Hospital furniture	Including Life science laboratory supplies, other consumables 1,500
			Artificial joints	X-ray tubes		
Molecular diagnostics 224			Other sports medicine (physiotherapy devices)	130		
236 Immunodiagnostics 526	Ablation devices 200		161 Dialysis 180	CT 177	88 Syringes 152	
	Other needles, catheters and cannulae 211 Advanced wound management (nonadhesive medical dressing)		Ophthalmic instruments 185	MRI 183		
			Prosthetics 199			
Other IVD instruments & consumables 1,200	263		Dental (consumables/	X-ray 214	Surgical gloves 175	
		instruments) 219	217			
	Drug delivery devices (e.g., infusion pumps, syringe pumps) 510		Dermatology devices 302	Ultrasound 229		
			Surgical machae			
	Surgical instruments (retractors, scalpels, etc.) 569		350	Other imaging	Other patient aids 209	
			Cardiovascular 380	parts & accessories 420		
IVD Non-procedure-specific		procedure-specific	Procedure-specific	Imaging/ Monitoring in	General frastructu	Others re
		Key: Low growth	High growth 22%			

Note: Procedure-specific pertains to cardiovascular, ophthalmology, orthopaedic etc.; Non-procedure specific includes products under critical care and surgery; in vitro diagnostics (IVD) includes human tissue/ fluid sample testing, Imaging / monitoring involves all diagnostic imaging apparatus and reagents and patient monitoring devices; General infrastructure and supplies pertains to hospital/medical infrastructure, other patient aids, and common consumables Source: Market reports, Med Devices Q2 2023 FITCH report, L.E.K. research and analysis

Indian MedTech manufacturers are increasingly focusing on R&D and innovation, in turn developing high quality products that meet market needs in both domestic and international markets. To this end, Indian MedTech OEMs have focused on innovation and collaboration with research institutions to foster the design and development of high-end devices. Several examples of innovation can be seen across cardiovascular, orthopedic, IVD and imaging segments (see Figure 2).

Innovation observed in the MedTech sector in India is to a) address unmet clinical needs, b) suit consumer needs or c) develop a low-cost product that matches MNCs in quality, safety and efficacy. An apt example here would be innovation in a high-maturity, low-growth segment like bracing to develop low-cost products that compare favorably with MNC products in quality, safety and efficacy (see Figure 3).

Figure 2 (Part 1):

India MedTech R&D capabilities

Meril

- In-house innovation lab and a dedicated 150-member R&D team to develop high-tech products such as robotics portfolio
- Innovation ranges from pursuit of lighter, futuristic materials for implants to advancements in oncology and polymerase chain reaction (PCR)-based testing solutions, and from innovative technologies to make implants for neurovascular applications to solutions for treatment of vascular and valvular disease therapy (Myval and MeRes 100)
- Meril Academy that caters to 7,000+ doctors nationally and internationally, serves as a bridge between technological advancements and their application in surgeries

TRIVITRON H E A L T H C A R E speaking your language

- Five dedicated innovation centers
- State-of-the-art R&D center at AMTZ campus, Vishakhapatnam
- R&D centers spearhead innovation in the fields of metabolomics, genomics, newborn screening, imaging and radiology, renal care, radiation protection, critical care, operating room solutions, and molecular diagnostics to create cost-effective and affordable medical technology products and services



- R&D centers (70,000 sq. ft.) in India and Italy focused on developing modular technology platforms that can be used across products; backed by more than 80 patents and over 50 CE- and Food and Drug Administration (FDA)-certified high-end medical devices
- The R&D center in Italy partners with Bologna University of Physics for advanced research; specializes in X-ray physics
- Patented medical device technology expertise covers power electronics for medical X-ray applications, X-ray shielding, patient monitoring (measurement of ECG, noninvasive blood pressure, capnography and cardiac output) and ventilation (ICU ventilators and anesthesia machines)

Figure 2 (Part 2):

India MedTech R&D capabilities

tynor

- Esteemed R&D wing Tynor Ortho Research and Appliance Development Organization (T.O.R.N.A.D.O.) aims to reshape the medical landscape, bringing groundbreaking advancements and creating products that revolutionize orthopedic care
- Strong focus on extensive R&D and strategic partnerships
 - E.g., partnership with SCTIMST to develop indigenous orthotic devices and conduct joint research in orthotics and rehabilitation
- Off-the-shelf products at a much lower cost vs. other markets

TRANSASIA®

- R&D centers in multiple locations (France, the UK, the U.S., Austria, India) with focus on developing cost-effective and user-friendly processes for technologies like molecular diagnostics
- R&D initiatives focus on five key areas of expertise: automation/robotics, product development, clinical solutions, Al/analytics, imaging/image processing
- The R&D Center of Excellence in Bengaluru is focused on design and development of next-generation devices while the R&D facility in Vizag is home to ongoing R&D of reagents for molecular diagnostics

⊗ SMT

- State-of-the-art R&D center in Galway, Ireland, and medical device park in Hyderabad
- The R&D center in Hyderabad houses 300 scientists and aims to develop advanced medical products in interventional cardiovascular, endovascular and other such niche and novel domains to address unmet clinical needs
- SMT's Talent Trial results were published in The Lancet, which is currently ranked second among 150 journals in the General and Internal Medicine subject category

Note: ICU=intensive care unit; ECG=electrocardiography Source: L.E.K. research and analysis



Note: High/Low scale is evaluated based on size of the Indian market relative to the global market, with the threshold being the ratio of the overall Indian MedTech market vs global; High/Low growth is evaluated based on 2023-2027 CAGR, with the threshold being 5% *Adhesive; Long tail of products within the "others" segment have been excluded; Revenue values indicated in USD Mn

Source: Fitch BMI; Private circle; L.E.K. research and analysis

On its part, the government of India has adopted several strategic measures and policies to promote R&D and innovation in the country, which have contributed to the growth of the MedTech sector. These include establishing national R&D, innovation and medical devices policies, building seven centers of excellence for the pharmaceutical and MedTech sectors, and providing financial assistance for developing common infrastructure facilities at existing medical device clusters. What is noteworthy is that MedTech companies have been high on the innovation scale even before these government initiatives were implemented.

This research ecosystem is well supported by a manufacturing ecosystem that meets domestic and international demand for medical devices.

B. Building MedTech manufacturing capabilities for domestic and export markets

India's potential as a manufacturing hub is underscored by its skilled workforce and participation in manufacturing employment, with scope for improvement in labor productivity (see Figure 4).

Country	Manufacturing employment: Number of people (2022, K)	Supply chain resilience: Mean turnaround time at port (days)	Labor productivity:* GDP per hour worked (2023, USD)	Highly skilled workers: Researchers in R&D (population, 2021)
China (For reference)	405,294	1.1	15	2,382,339
India	154,755	1.1	8	368,465
Thailand	11,249	1.0	15	145,115
Vietnam	20,600	0.9	10	76,488
Malaysia	5,668	1.2	26	24,639
Indonesia	38,487	1.8	14	110,200

*Overall productivity used, as most recent data on manufacturing productivity dates back to 2009 Note: GDP=gross domestic product; OECD=Organisation for Economic Co-operation and Development Source: OECD; The Global Economy; World Bank; L.E.K. research and analysis

The Indian government has been offering economic incentives to make the country an attractive market for greenfield and brownfield investments in domestic manufacturing. The oldest among these is the "Make in India" initiative of 2014, a government-led campaign to transform India into a global manufacturing hub and attract foreign investment. Under Make in India, 100% FDI for both brownfield and greenfield setups is permitted. In addition, tie-ups at the country level are encouraged to boost tech transfer.

The production-linked incentive (PLI) scheme for manufacturing is another government scheme applicable to large-scale medical device manufacturing focusing on cancer, imaging, implants and anesthetics. With a net value of over US\$ 2.2 mn, the scheme is exclusive to greenfield investments and covers equipment, implants and consumables. In early 2024, PLI 2.0 scheme has been introduced to cover diagnostics including IVD.

L.E.K. Consulting

Figure 4:

Comparative Analysis of Manufacturing Employment, Supply Chain Resilience, and Labor Productivity in Asian Economies

Medical device parks are also being created nationwide to ease raw material sourcing and mitigate supply chain challenges to make medical device manufacturing feasible in India. The government has financed four medical device parks in Himachal Pradesh, Madhya Pradesh, Tamil Nadu and Uttar Pradesh, with a total outlay of US\$ 50 mn. These parks will strengthen the manufacturing ecosystem and provide necessary infrastructure and services in one place for MedTech OEMs, in turn aiding in the development of complex multicomponent and high-end medical devices.

India's first premier MedTech park, AMTZ, was established in 2016 in Andhra Pradesh; a year later, one of the largest MedTech Zones was set up in Telangana (see Figure 5).

Figure 5: First two medical device park case studies

MedTech Zone in Hyderabad, Telangana

Target product segments | Minimally invasive coronary stent system and related accessories; IV fluids and bags; surgical, ophthalmic and cosmetic medical devices and dressings; dental and maxillofacial implants; prosthetics; disinfection equipment; hospital HVAC systems; single-use needles

Location | Sultanpur, Patancheru

Size | 302 acres

Current investment | INR 1500 Cr from over 60 companies*

Proposed Employment | 7,000 people

- Strategic location (well connected to domestic markets, airport and ports on eastern and western coasts), ecosystem of suppliers (presence of over 1,000 SMEs in precision engineering and over 6,000 plastics manufacturers), availability of talent pool (presence of academic research and training centers and engineering and medical institutes) and strong incentive structure make this the location of choice for tenant industries
- Companies like Huwel Lifesciences, EMPE Diagnostics and Blue Semi have developed first-in-the-world "Made in Telangana" innovative devices
- Marquee companies like Medtronic, B-Braun and SMT have invested in the sector
- State government has signed memorandums of understanding with six organizations having ISO-certified facilities for providing medical device testing and prototyping services to tenants

Andhra Pradesh MedTech Zone

Target product segments | Ventilators, oxygen concentrators, RT PCR kits, mobile container hospitals, mobile RT PCR vehicles, mobile oxygen plants, radiology, mother and child, artificial limbs, anesthesia machines, surgical instruments, thermal cameras, hospital furniture, consumables and disposables

Location | Visakhapatnam, Andhra Pradesh

Size | 270 acres

Financial support received | US\$27 million

Expected tenant companies | 100

- India's first premier medtech park with common manufacturing and common scientific facilities that include specialized laboratories, warehousing and testing centers such as the Center for EMI-EMC and Electrical Safety; Center for Biomaterial Testing; Center for 3D Printing; Centers for lasers, MRI superconducting magnets, gamma irradiation, and mold and machining; and several other industrial service centers
- It also houses the Bio Valley Incubation Council and the Kalam Institute of Health Technology (KIHT); these centers support innovation, industry promotion, policymaking and a knowledge repository; KIHT is the only WHO Collaborating Centre for Health Innovation
- Marquee companies like Innvolution, Transasia, Trivitron, Molbio Diagnostics, SS Innovations, BPL Medical Technologies, etc., are partners of AMTZ

*Data as of March 2024

Note: IV=intravenous; HVAC=heating, ventilating and air-conditioning; SMEs=subject matter experts; ISO=International Organization for Standardization; RT PCR=reverse transcription polymerase chain reaction; MRI=magnetic resonance imaging; WHO=World Health Organization Source: L.E.K. research and analysis

Subsequent facilities in North and Central India have expanded the medical device park capacity in India (see Figure 6).

Figure 6:

Recent medical device park case studies

Uttar Pradesh Medical Device Park in Sector 28, Yeida

Target product segments | Cancer

care/radiotherapy, imaging, anesthetics, cardiorespiratory, renal care, implantable electronic devices

Location | Sector 28, Yeida

Size | 350 acres

Investment expected | INR 15,000 Cr

Proposed employment | 7,000 people

- 37 plots had been allotted to manufacturers under target segments as of November 2022
- Will also house headquarters for the Export Promotion Council for medical devices and will support all medical device manufacturers in issues pertaining to exports
- Focus on small electronics equipment like blood pressure monitors, glucometers, etc., that are usually imported
- Will allow PPP model or sharing of capex
- Will address key concerns of Indian manufacturers that include access to cost-effective testing and scientific facilities
- Will help make indigenous manufacturers more competitive and enhance quality of Indian products

Madhya Pradesh Medical Device Park in Vikram Udyogpuri, Ujjain

Target product segments | Radiotherapy, insulin syringes, blood collection systems, orthopedic implants, ENT

Location | Vikram Udyogpuri, Ujjain

Size | 200 acres

Current Investment | INR 1400 Cr from 28 industries*

Proposed employment | 4,500 people

- The investment proposals will have a dual impact of job creation and advancement in MedTech sector
- Notable investor companies: Samson Scientifics and Surgicals, Omexa Formulary Pvt. Ltd., US Herbals, Bhandari Labs, SPM Medicare, Yuvitel Technologies, Bionic Meditech, Medqverse Private Ltd., Technoplast Packaging, Dksortho and Medical Pvt. Ltd. etc.
- The park is aimed at boosting health infrastructure and reducing cost of medical devices while promoting employment
- Close proximity to Indore and Delhi-Mumbai Expressway makes Vikram Udyogpuri a suitable location

*Data as of March 2024

Note: IV=intravenous; HVAC=heating, ventilating and air-conditioning; SMEs=subject matter experts; ISO=International Organization for Standardization; RT PCR=reverse transcription polymerase chain reaction; MRI=magnetic resonance imaging; WHO=World Health Organization Source: L.E.K. research and analysis

In addition to medical device parks, India houses 21 medical device clusters with presence of both domestic and multi-national MedTech OEMs. These are present across nine states, with Uttar Pradesh having the highest share at 29%; 736 units are currently in operation in these 21 clusters. The attractiveness of a location or

cluster is driven by the presence of a favorable manufacturing ecosystem supported by the availability of infrastructure, land, talent, distribution and logistics, and tax incentives.

Overall MedTech manufacturing ecosystem in India is supportive, driven by favorable Govt. policies, skilled talent availability and high-quality infrastructure.





*The chart does not include the "others" segment, which comprises smaller medical devices with lower market value, collectively valued at US\$717 million;

Note: CAGR=compound annual growth rate; IVD=in vitro diagnostics

Source: Fitch report; Observatory of Economic Complexity; Global Trade Research Initiative report; L.E.K interviews, research and analysis

The MedTech manufacturing capacity is used to serve both domestic and international markets. India exported MedTech devices worth US\$ 3billion in 2022, driven by compliance to international standards, high-quality products at competitive prices, manufacturing scalability and comprehensive documentation support. U.S. and Europe have emerged as key export destinations. Indian medical device exports to the US have grown at 16% CAGR between 2017 to 2022. Netherlands and UK at 23% and 10% CAGR respectively during the same period, have served as top export destinations in Europe. Indian MedTech OEMs have demonstrated device exports across several key segments, including IVD, imaging and general consumables (see Figure 7). Further scope for exports exists in several other device categories as well.

A primary tailwind for Indian MedTech exports is the increasing value-consciousness among otherwise primarily quality-conscious Western markets. India's high quality at value pricing fits in well with this need and is reflected in the growth in exports across key destinations. India is capable of manufacturing devices of equivalent quality to FDA approved products at competitive prices due to a) support by the Govt. under the "Make in India" initiative that provides export flexibility and assistance for new factories, especially in discounted biotech zones, and b) availability of cheap raw materials in certain device segments like cheap titanium for screws and plates in orthopedics segment.

Investor outlook

Liberal government investment policies and a comprehensive manufacturing ecosystem have resulted in US\$ 2.80 billion in FDI inflows in the medical and surgical appliances sector between April 2000 and March 2023, reflecting confidence among global players. The outlook is suggestive of further upside.

Favorable macroeconomic environment, supportive government policies and a highpotential export opportunity have made the Indian MedTech sector an investment magnet (see Figure 8). This infusion of private capital is aiding companies in expanding capacity, diversifying their portfolios and strengthening their marketing efforts in the pursuit of growth.

Figure 8:

India MedTech transaction comparables



Source: O3 capital report; Private Circle; L.E.K. research, interviews and analysis

In the more mature Chinese market, several MedTech companies on the back of supportive regulations and increased focus on R&D and tech development, have scaled to US\$1 billion+ in revenues over the past 10-15 years. These include Shinva, United Imaging, Wego and Mindray, among others.

With similar market and regulatory tailwinds, multiple Indian MedTech OEMs exist that too show the promise of being able to scale across diverse segments (see Figure 9).

Figure 9:

Presence of Indian OEMs across various market segments

Market segments	Companies
In vitro diagnostics/molecular diagnostics	
Advanced wound management	Healthum
Dental	DentCare LAXMI DENTAL DENTAL DENTAL IDS Denmed Dental Group
Imaging	DEPENDENT DE LA PRASAMY Beaking your Inguage
Artificial joints/orthotics	Meril Healthum bioradmedisys
Cardiovascular	Smi translumina Meril RELIS S

Source: L.E.K. research, interviews and analysis

The opportunity to build multiple billion-dollar MedTech businesses in India clearly exists, and the Chinese precedent validates the prospect. With rising healthcare spending, technological advancements, expanding infrastructure, growing domestic demand, supportive manufacturing ecosystem, a proven track record of execution and international reputation for quality, the MedTech industry puts forth significant opportunities in one of the world's fastest-growing economies.

For more information, please **contact us**.

About the Authors



Stephen Sunderland

Stephen is a Partner and member of L.E.K.'s Board of Directors and serves as Head of L.E.K.'s Asia-Pacific Region. Stephen has more than 20 years of experience across Asia and Europe working with multinational corporations, midsize companies, social enterprises and nonprofits, financial investors and governments. He leads L.E.K.'s Healthcare and Life Sciences practice in South East Asia as well as our MedTech practice in China. Stephen is the Executive Director of L.E.K.'s AsiaPacific Life Sciences Centre of Excellence.



Ashwin Goel

Ashwin Goel is a Partner based in L.E.K. Consulting's Mumbai office. Ashwin co-leads L.E.K.'s Healthcare and Life Sciences practice in India and is a member of the Global Education practice. Within the healthcare sector, he advises biopharmaceutical and manufacturing services clients on a range of topics such as growth strategy, new market entry, international expansion, and buy- and sell-side commercial due diligence.



Monish Rajpal

Monish Rajpal is a Managing Director and Partner in L.E.K. Consulting's New York office. Monish's client work focuses on biopharmaceuticals, life sciences, medtech/medical devices, healthcare services, and the emerging overlap and convergence among these various sectors. He advises clients across the size and value-chains spectrum and on a broad range of issues, including broad strategy, growth and innovation, life-cycle management and opportunity assessment.



Saleem Butt

Saleem Butt is a principal in L.E.K. Consulting's APAC Healthcare practice, where he specializes in advising Asian and multinational companies on opportunities across the APAC region.

About the Authors



Amrita Mukherjee

Amrita Mukherjee, Ph.D., is a Senior Healthcare Consultant in L.E.K. Consulting's Mumbai office and a member of the Southeast Asia Healthcare and Life Sciences practice. Amrita works with pharmaceutical, medtech, and life sciences clients across multiple areas, including market assessment, growth strategy, launch strategy, and buy- and sell-side commercial due diligence.



Samyukta Ravishankar

Samyukta Ravishankar, Ph.D., is a Senior Healthcare Consultant in L.E.K. Consulting's Singapore office and a member of the Asia Pacific Healthcare and Life Sciences practice. Samyukta has experience in Life Sciences, MedTech and Healthcare services sector in different engagements ranging from market opportunity assessment, growth strategy, competitive benchmarking, pricing and market access strategy, and commercial due diligence across APAC markets (including India).

About L.E.K. Consulting

We're L.E.K. Consulting, a global strategy consultancy working with business leaders to seize competitive advantage and amplify growth. Our insights are catalysts that reshape the trajectory of our clients' businesses, uncovering opportunities and empowering them to master their moments of truth. Since 1983, our worldwide practice – spanning the Americas, Asia-Pacific and Europe – has guided leaders across all industries, from global corporations to emerging entrepreneurial businesses and private equity investors. Looking for more? Visit **lek.com**.

L.E.K. Consulting is a registered trademark of L.E.K. Consulting LLC. All other products and brands mentioned in this document are properties of their respective owners. © 2025 L.E.K. Consulting LLC