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# INDIA'S HEALTHCARE MARKET BUSINESS OPPORTUNITIES & CHALLENGES

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In collaboration with

**icbc**  
INDO - CANADIAN  
BUSINESS CHAMBER

**WORKING PAPER SERIES**

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## WORKING PAPER SERIES

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## ABSTRACT

*India's country's health infrastructure is over-stretched and needs to be strengthened if it has to take on the challenges of the twenty-first century and help the country reap the benefits of its demographic dividend. On the other hand, India's healthcare industry is also one of its fastest growing sectors – projected to reach \$372 billion by 2022. The current paper will provide a brief analysis of the country's health systems and policy landscape, and explore challenges and opportunities for the way forward for the healthcare industry. The paper will cover the healthcare market which develops and provides products, solutions, and/or services for diagnosis, treatment, and prevention. It will outline growth drivers, challenges, regulatory environment, market trends and competition in key segments.*

## 1. INTRODUCTION

### 1.1 INDIA'S HEALTHCARE SECTOR: BACKGROUND AND CONTEXT

The story of India's healthcare sector is plagued by great contradictions. It is one of the countries with the lowest per capita expenditure on healthcare cost as percentage of GDP and cost of healthcare services in the world. According to a joint NATHEALTH-PwC industry report from 2018, the cost of medical treatment in India was less than 1/10th that in the US. The report further stated that clinical outcomes in India's top hospitals were comparable to those at internationally recognized facilities. On the other hand, health inequity arising out of inadequate access to healthcare services as well as lack of affordability is prevalent (EY and FICCI, 2016).

India's health is currently ailing from the 'triple burden of disease' - infectious diseases, noncommunicable diseases (NCDs), and a wave of new drug-resistant pathogens causing epidemics and pandemics. While significant progress is being made in expanding health insurance coverage, improving treatment outcomes, and setting up primary healthcare facilities in rural areas, India's healthcare system will need a complete redesign to ensure accessibility, affordability and availability of quality medical care to all. The Covid-19 pandemic has highlighted, now more than ever before, the need to invest in India's basic healthcare, surveillance and public health.

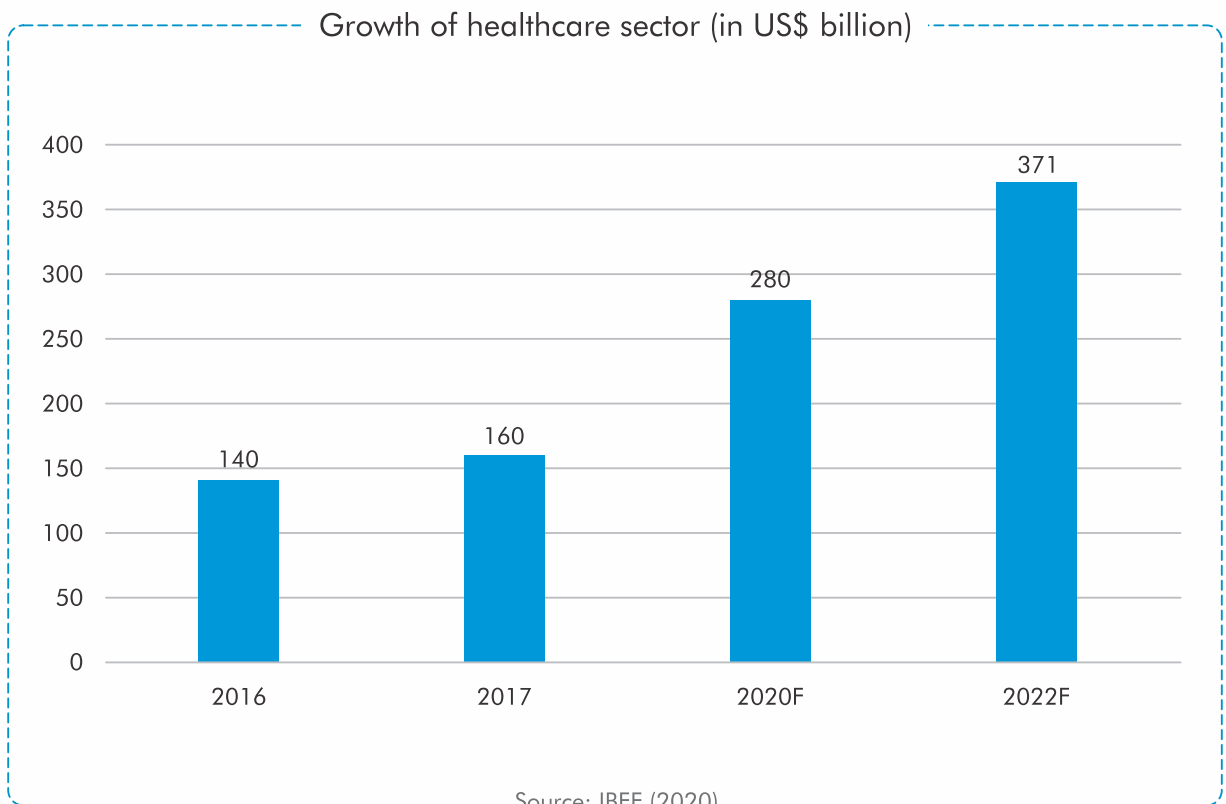
India is presently in a state of health transition. Adding to the threats posed by infectious diseases and antimicrobial resistance is the rising incidence of NCDs that have emerged as a leading cause of mortality. Social, demographic, environmental and economic factors have contributed to this epidemiological transition. With increasing urbanisation and problems related to modern-day living in urban settings, about 50% of spending on in-patient beds is for lifestyle diseases – this has increased the demand for specialised care. In India, lifestyle diseases have replaced traditional health problems. Most lifestyle diseases are caused by high cholesterol, high blood pressure, obesity, poor diet and alcohol.

India's healthcare delivery mechanism involves care provided through private and public facilities. While the latter is concentrated in urban and semi-urban areas, the former extends primary care to rural areas as well. The market for secondary, tertiary and specialised care in villages and far-flung areas is underserved. Moreover, the private sector accounts for almost 74% of the country's total healthcare expenditure (IBEF, 2020). Though India has medical institutions, facilities and providers that are comparable to the best across the world in tertiary, secondary and quaternary care, long strides need to be made to cover the gap primary healthcare. Currently, quality primary care is available mostly in the urban areas, which is where about 30% of the population is. Better collaboration among the public and private sectors will be crucial to ensure affordability, availability and accessibility to quality healthcare. National Health Policy 2017 outlines the role of the private sector.

There are 11.55 lakh MBBS doctors registered with the Medical Council of India or state medical councils as of 2018 (Government of India, 2019), up from 8.27 lakh in 2010 (IBEF, 2020). Taking 80% availability into consideration, this translates to about 9.24 lakh doctors in service. India has one doctor for every 1,457 people for a population of 1.35 billion. This is much lower than the WHO prescribed 1:1,000 ratio. The number medical colleges in India increased to 529 in FY19 from 381 in Fy13.

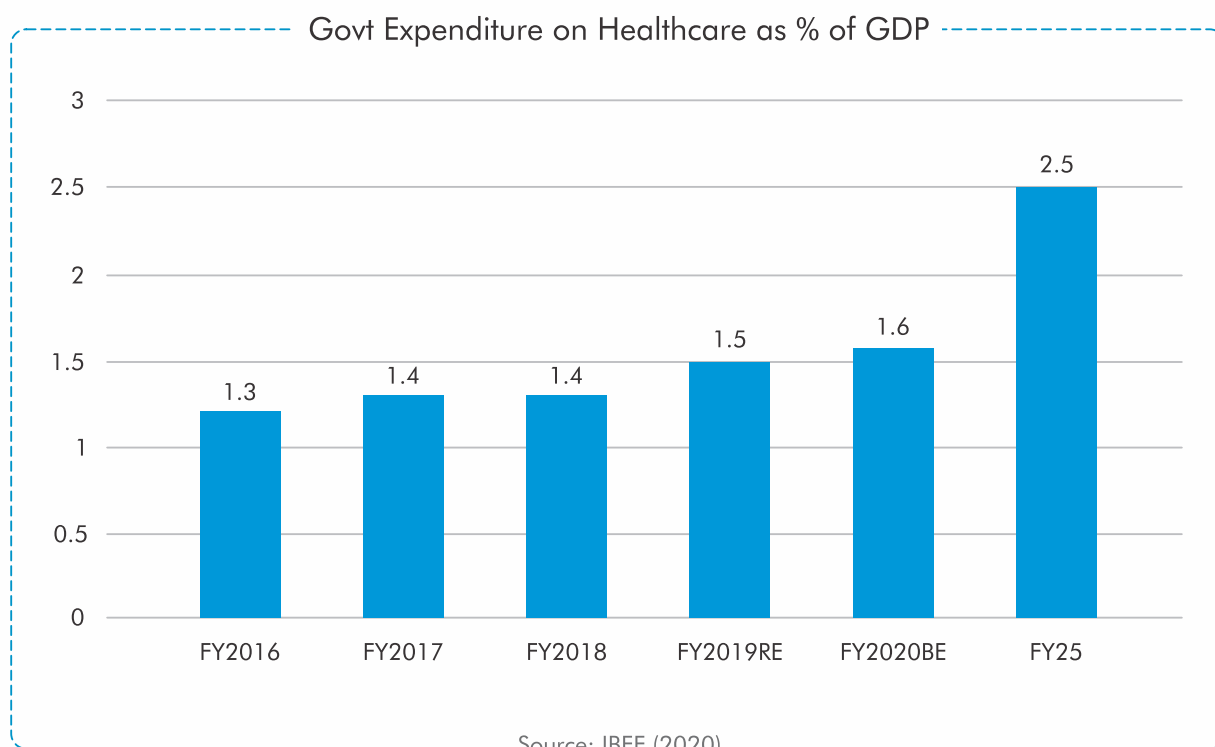
## 1.2 MARKET INSIGHTS

India's healthcare industry is one of the fastest-growing sectors, a market that is expected to reach \$372 billion by 2022 (IBEF, 2020). During 2016-22, the market is projected to record a CAGR of 17.69%. The share of healthcare in GDP is expected to rise 19.7% by 2027.



This growth will be fuelled by rising incomes, increased demand for better healthcare, diseases induced by lifestyle changes, wider insurance cover and rising health awareness among consumers. The country has also become one of the leading destinations for high-end diagnostic services. Healthcare has become one of India's largest sectors, both in terms of revenue and employment.

The government's expenditure on healthcare has grown to 1.6% of GDP in FY20BE from 1.3% in FY16. There is a significant scope for enhancing healthcare services considering that healthcare spending as a percentage of Gross Domestic Product (GDP) is rising. Government of India aims to increase healthcare spending to 2.5% of GDP by 2025.



Players in the industry are trying to differentiate themselves by providing multiple health care services under one roof. Offering a range of healthcare and wellness services under a single brand has become a trend. Patients and healthcare services seekers find it convenient. Demand of such arrangements boosts the healthcare sector. Certain players in the industry focus, however, only on providing one kind of healthcare service to its customers. This also helps them to be the leader in that service.

The hospital industry is expected to reach \$132 billion by 2023 from \$ 61.8 billion in 2017; growing at a CAGR of 16-17%. The hospital services market, which represents one of the most important segments of the Indian healthcare industry, is currently valued at \$80 billion and accounts for 71% of the industry revenues. About \$200 billion is expected to be spent on medical infrastructure by 2024.

The value of merger and acquisition (M&A) deals across hospitals jumped by a record 155% to ₹ 7,615 crore (US\$ 1.09 billion) in FY19. Vaatsalya Healthcare is one of the first hospital chains to start focus on tier II and tier III for expansion (IBEF, 2020).

To encourage the private sector to establish hospitals in these cities, the Government has relaxed taxes on these hospitals for the first five years. Government of India aims to set up 2,500-3,000 more hospitals in Tier II and Tier III cities. The private sector can play a great role in developing infrastructure, technologies, standards of practice and treatments, and capacity-building, and achieving economies of scale. India will have a potential requirement of 1.75 million new beds by the end of 2025. Leading multispecialty corporate hospital chains in India include Apollo Hospitals, Fortis Healthcare, Narayana Health, Manipal Hospitals, Parkway Pantai - Gleneagles Global Hospitals, Max Group, and Sahyadri Hospitals.

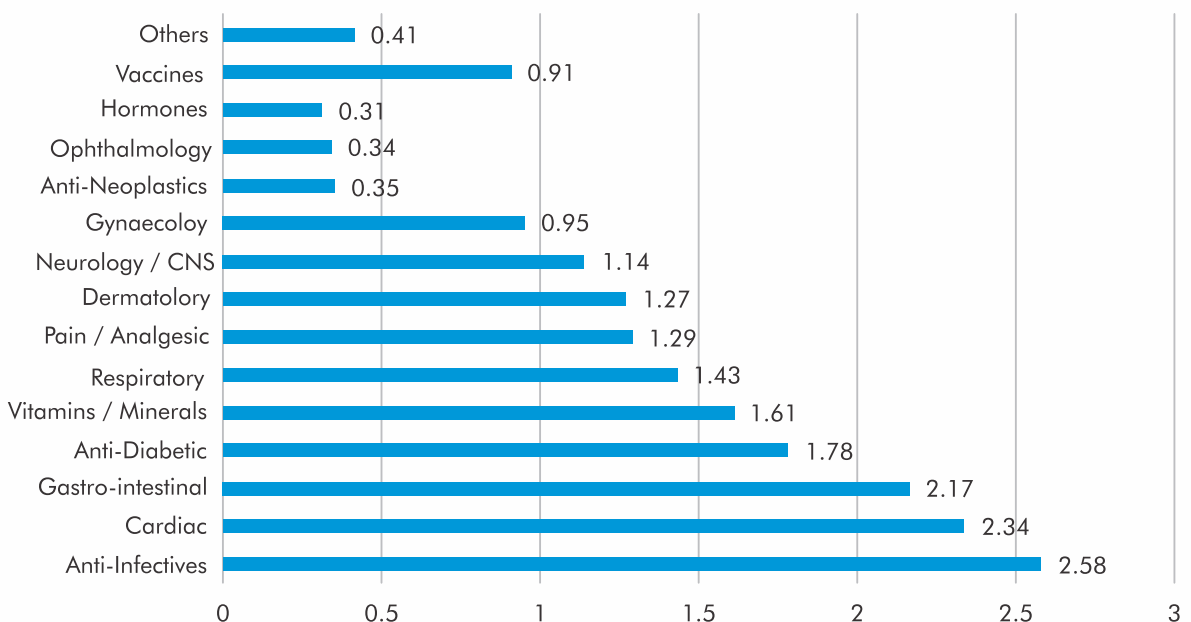
## 2. PHARMACEUTICALS / BIOTECHNOLOGY

India's pharmaceutical sector is expected to grow to US\$ 100 billion by 2025. It supplies over 50% of global demand for various vaccines, 40% of generic demand in the US and 25% of all medicine in the UK (IBEF, 2020). During December 2019, on moving annual total (MAT) basis, industry growth was at 9.8%, with price growth at 5.3%, new product growth at 2.7%, while volume growth at 2% y-o-y.

India's domestic pharmaceutical market turnover reached ₹1.4 lakh crore (US\$ 20.03 billion) in 2019, up 9.8% y-o-y from ₹129,015 crore (US\$ 18.12 billion) in 2018. The drugs and pharmaceuticals sector attracted cumulative FDI inflow worth US\$ 16.50 billion between April 2000 and March 2020 according to the data released by Department for Promotion of Industry and Internal Trade (DPIIT). Pharmaceuticals export from India stood at US\$ 20.70 billion in FY20. Pharmaceutical export includes bulk drugs, intermediates, drug formulations, biologicals, Ayush and herbal products and surgical.

With 70% of market share (in terms of revenues), generic drugs form the largest segment of the Indian pharmaceutical sector. Over the Counter (OTC) medicines and patented drugs constitute 21% and 9%, respectively. The share of generic drugs is expected to continue increasing; domestic generic drug market is expected to reach US\$ 27.9 billion in 2020. Following the introduction of product patents, several multinational companies are expected to launch patented drugs in India.

Segment-wise Moving Annual Turnover in 2018 (in US\$ billion)

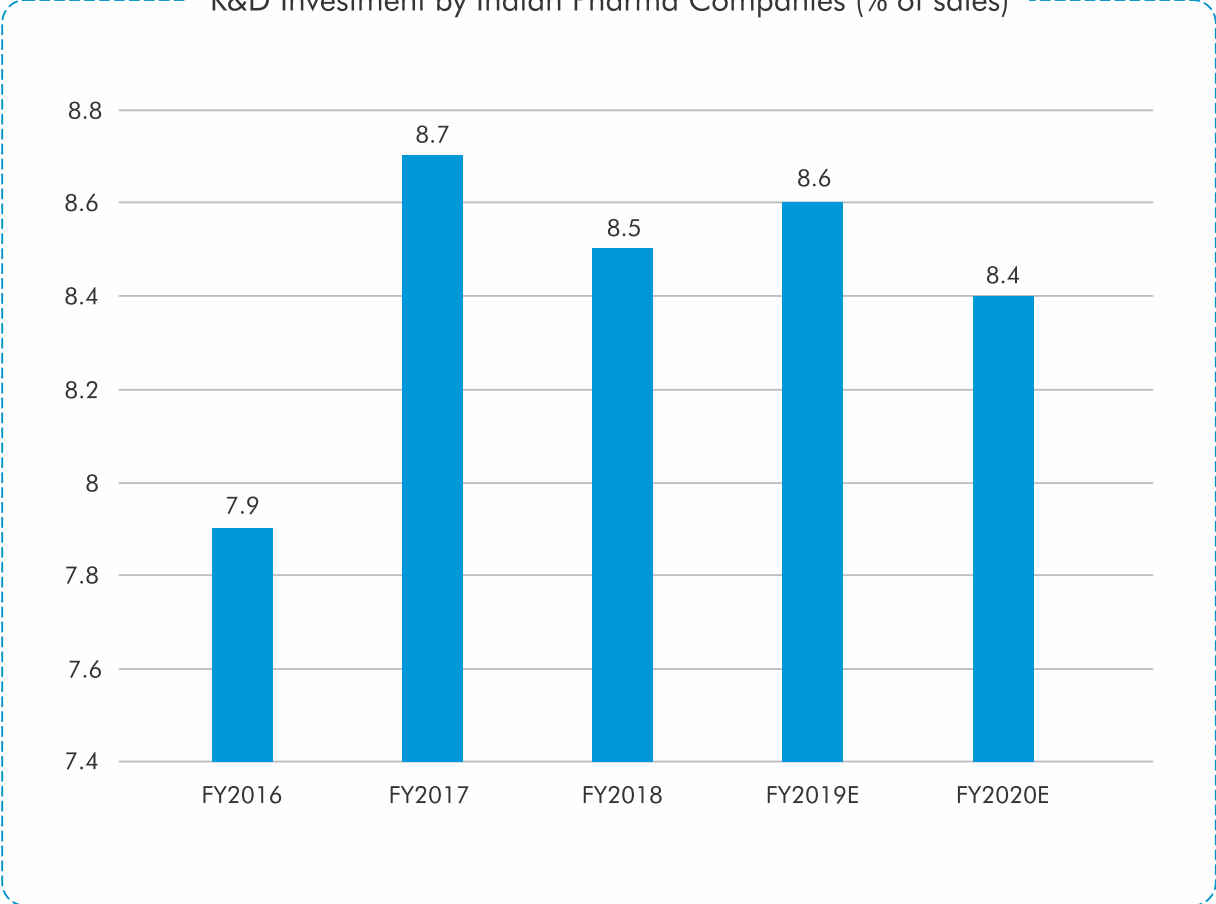


Due to their competence in generic drugs, growth in this market offers a great opportunity for Indian firms. India is the largest provider of generic medicines globally, occupying a 20% share in global supply by volume (EY, 2020). Based on moving annual turnover, Anti-Infectives (13.6%), Cardiac (12.4%), Gastro Intestinals (11.5%) had the biggest market share in the Indian pharma market in 2018. The highest growth in sales in 2018 were seen in hormones (14.2%), anti diabetic (12.9%), and respiratory (12%) (IBEF, 2020). During December 2019, on moving annual total (MAT) basis, industry growth was at 9.8%, with price growth at 5.3%, new product growth at 2.7% while volume growth was at 2% y-o-y.

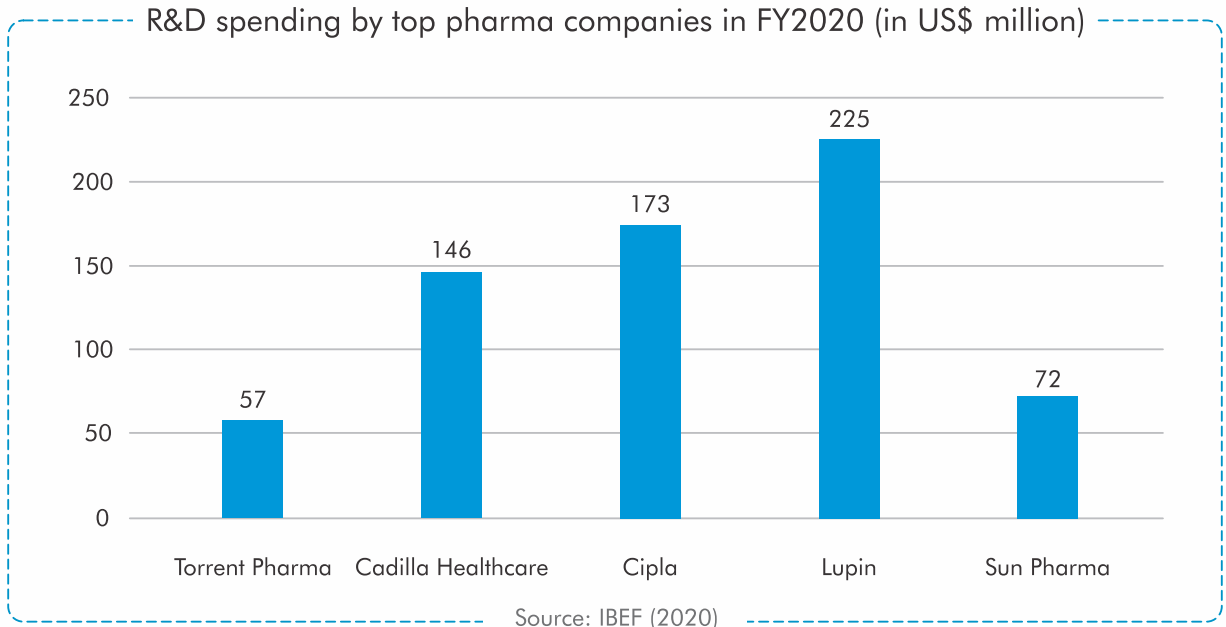
India's OTC drugs market is estimated to have grown at a CAGR of 16.3% to US\$ 6.6 billion over 2008-16 and is further expected to grow on the account of increased penetration of chemists, especially in rural regions. The India OTC market was accounted at US\$ 4.61 billion in 2018 and is expected to reach US\$ 10.22 billion by 2024.

India offers vast opportunities in R&D. Its competitive advantage also lies in the increased success rate of Indian companies in getting Abbreviated New Drug Application (ANDA) approvals. Increasing private sector investments in R&D and acquisitions are driving the sector's growth. Rising penetration of health insurance is expected to drive expenditure on medicine. Economic prosperity is also driving the improvement in affordability for generic drugs in the market. Medicine spending in India is projected to grow 9-12% over the next five years, leading India to become one of the top 10 countries in terms of medicine spending. Indian pharma companies spend 8-13% of their total turnover on R&D.

R&D Investment by Indian Pharma Companies (% of sales)







In FY20, highest expenditure on R&D was made by Lupin, followed by Cipla. Sun Pharma's R&D plan includes developing more products through expanded R&D team for global markets, focussing on more complex products across multiple dosage forms and investments in speciality pipeline.

The country's biotechnology industry comprising biopharmaceuticals, bio-services, bio-agriculture, bio-industry, and bioinformatics is expected to grow at an average growth rate of around 30% a y-o-y to reach US\$ 100 billion by 2025. The government plans to allocate US\$ 70 million for local players to develop biosimilars. The domestic market is expected to reach US\$ 40 billion by 2030. As on August 2019, the moving annual turnover (MAT) for biosimilar molecules sold in the domestic market stood at ₹1,498 crore (US\$ 214.31 million). The Contract Research and Manufacturing Services industry (CRAMS) - estimated at US\$ 17.27 billion in 2017-18, is expected to reach US\$ 20 billion by 2020. The market has more than 1,000 players.

The consumer healthcare segment in pharmaceuticals is currently estimated at above USD 3 billion. It comprises of two segments. The first is the Rx-to-OTC segment, comprising brands that have been built through the prescription route but over time, move on to being self-medicated. Crocin and Volini are two suitable examples. Pure-play OTC includes non-Rx brands that have been built through direct-to-consumer marketing, such as the Eno or Pudim Hara brands. This segment includes the nascent category of condition-specific nutrition products such as Glucerna or Slim-Fast. Deloitte expects India's consumer healthcare segment to grow at 14 to 16 per cent to become a USD 14 to 18 billion market by 2020.

## 2.1 POLICY SUPPORT

India plans to set up a nearly ₹1 lakh crore (US\$ 1.3 billion) fund to provide boost to companies to manufacture pharmaceutical ingredients domestically by 2023. Government of India unveiled 'Pharma Vision 2020' to make India a global leader in end-to-end drug manufacture. Approval time for new facilities has been reduced to boost investment. Government of India has offered ₹6,940 crore (US\$ 942.8 million) production linked incentives between 5-20% for incremental sales and plans to set up three mega drug parks to drive sustainable cost competitiveness.

Indian government has taken many steps to reduce costs and bring down healthcare expenses. Speedy introduction of generic drugs into the market has remained in focus and is expected to benefit the Indian pharmaceutical companies. In addition, the thrust on rural health programmes, lifesaving drugs and preventive vaccines also augurs well for the pharmaceutical companies.

The government plans to provide free generic medicines to half the population at an estimated cost of US\$ 5.4 billion. Affordable medicines under Pradhan Mantri Bhartiya Janaushdhi Kendra's (PMBJKs) achieved an impressive sale of ₹100.40 crore (US\$ 14.24 million) in first two months of FY21.

At 2% penetration, the vaccines market is significantly under-penetrated, despite suffering from a high burden of deaths by vaccine preventable diseases. The market is estimated currently at \$250 million, with the private segment accounting for two-thirds share. KPMG expects the vaccines market to grow to USD 1.7 billion by 2020. However, the upside in an aggressive growth scenario is significant. Active shaping by players could lead to higher than expected growth in both private and public segments, and help achieve a USD 3.5 billion size by 2020.

The Government of India launched Mission Indradhanush with an aim of improving coverage of immunisation in the country. It aimed to achieve at least 90% immunisation coverage by December 2018 and cover unvaccinated and partially vaccinated children in rural and urban areas of India.

## 2.2 INVESTMENTS

- Lupin inked a partnership with US-based drug maker AbbVie to develop a novel cancer drug that will potentially earn it over \$1 billion in fees, milestone payments and royalties. The drug that is being developed is expected to be a first of its kind to treat hematological cancers.
- In May 2020, Jubilant Generics Ltd entered into a non-exclusive licencing agreement with US-based Gilead Sciences Inc to manufacture and sell the potential COVID-19 drug Remdesivir in 127 countries, including India.
- On August 04, 2020, Drugs Controller General of India (DCGI) gave approval to Serum Institute of India, Pune to conduct Phase II + III clinical trials of Oxford University-Astra Zeneca COVID-19 vaccine (COVISHIELD) in India.
- On July 17, 2020, ZyCoV-D, the plasmid DNA vaccine designed and developed by Zydus Cadila and partially funded by the Department of Biotechnology, Government of India has initiated phase I/II clinical trials in healthy subjects, making it the first indigenously developed vaccine for COVID-19 to be administered in humans in India.

## 2.3 WAY FORWARD

Going forward, better growth in domestic sales would also depend on the ability of companies to align their product portfolio towards chronic therapies for diseases such as cardiovascular, anti-diabetes, anti-depressants and anti-cancers, which are on the rise. Due to increasing population and income levels, demand for high-end drugs is expected to rise. Growing demand could open up the market for production of high-end drugs in India. With 70% of India's population residing in rural areas, pharma companies have immense opportunities to tap this market. Demand for generic medicines in rural markets has seen a sharp growth. Various companies are investing in the distribution network in rural areas.

Player actions in four areas will drive growth. First, companies need to produce locally or leverage supply partnerships. GlaxoSmithKline's local partnership for the HiB vaccine with Bio-

manguinhos in Brazil is a case in point. Second, players will need to conduct studies on the economic impact of vaccination and establish vaccine safety and performance standards. Third, there is a need to extend coverage beyond paediatricians and include general practitioners, consulting physicians and gynaecologists. Finally, players need to enhance supply chain reliability and reduce costs.

### 3. DIGITAL INNOVATION IN HEALTHCARE

Digital disrupted business models have changed consumer buying life and cycles as well. Digital health-driven transformations will drive major shifts in the markets for m-health, telehealth, AI-enabled care, extensive use of augmented reality and virtual reality, internet of things (IoT), and use of blockchain technology to drive transparency and data security (Deloitte, 2020).

Most of the current efforts in digital innovation in healthcare are directed toward enhancing customer engagement by providing wrap-around services for key products. Some companies are also making headway toward achieving operational efficiency in their R&D, manufacturing, supply chain and marketing business functions. Below are some of the key areas where Indian life sciences companies have started adopting digital technologies:

- **Patient engagement:** Tools / services for increasing patient awareness about disease / health, inducing behavioral changes, encouraging medication adherence, enabling self-management; digital campaigns (including multichannel marketing)
- **Physician engagement:** Tools / services for sharing educational material; interactive portals to connect, learn and share with peer fraternity; tools / data to enable informed decision making
- **Field force effectiveness:** Technology interfaces such as tabs for e-detailing and easy day-to-day reporting; smart mobile apps for appointment bookings and work day planning; mobile learning solutions
- **R&D efficiency:** Clinical trial data management solutions to improve clinical trial efficiency; technology and data to improve R&D productivity / efficiency
- **Supply chain management:** Use of software to streamline supply and demand and connect buyers to sellers quickly; serialization

- **Telehealth**

Telemedicine market in India is expected to rise at a CAGR of 20% during 2016-20, reaching \$32 mn by 2020. Telemedicine is a fast-emerging trend in India. Major hospitals (Apollo, AIIMS, and Narayana Hrudayalaya) have adopted telemedicine services and have entered several public-private partnerships (PPP). National Telemedicine services completed more than 2 lakh teleconsultations since its launch, enabling patient-to-doctor consultations from the confines of their home, as well as doctor-to-doctor consultations.

- **Artificial Intelligence**

The applications of AI in the healthcare space in India will be worth US\$ 6 billion (INR ~431.97 bn) by 2021. Rising adoption of AI-based applications has enabled people to talk directly to doctors, physician, and expertise for the best treatment. It is also capable of solving problems of patients, doctors, and hospitals as well as the overall healthcare industry.

- **Mobile Health and Wearables**

India is emerging as a strong market for wearables, with approximately 2 million units sold in 2017, expected to reach 129 million units in 2030. As per a report published by the Ministry of Electronics and IT in 2018, India holds the second spot globally (after China) on various dimensions of digital adoption. The country saw the number of mobile phone subscriptions and internet subscribers increase by 27% and 70% respectively between 2014 to 2017 and a decline in mobile data prices to a quarter of the 2014 prices (EY, 2020). Strong mobile technology infrastructure and launch of 4G is expected to drive mobile health initiatives in the country.

### 3.1 POLICY SUPPORT

In August 2020, Prime Minister Narendra Modi announced the launch of the National Digital Health Mission (NDHM) that aims to create an “open digital health ecosystem (health ODE)”. This will be a shared digital infrastructure that can be leveraged by both public and private enterprises to build and provide new, innovative, healthcare solutions. Its key building blocks include standardized health registries, a unique patient Identity (ID), federated health records, interoperability, and automatic claim settlement engines.

The National Health Policy (2017) has three distinct goals:

- Use electronic mediums to gather district-level health data by 2020
- Reinforce the health surveillance system by establishing registries for specific diseases by 2020
- Establish federated national e-health architecture, setting-up of health information exchanges and national Health Information Network by 2025

To achieve these goals, the government is establishing regulatory bodies (e.g., National eHealth Authority, National Digital Health Authority, etc.) and launching new legislations and policies (e.g., Digital Information Security in health care Act to regulate digital health data and ensure privacy, etc.).

### 3.2 INVESTMENTS

- In August 2019, Microsoft India and Apollo Hospitals Group entered in agreement to set up a National Clinical Coordination Committee for AI-powered Cardiovascular Disease Risk Score API.
- In April 2020, first COVID-19 sample collection mobile lab of the country, namely ‘Mobile BSL-3 VRDL Lab’, was launched that can process more than 1,000 samples in a day and enhance country’s capabilities in fighting COVID-19

## 4. MEDICAL DEVICES

India is a land full of opportunities for players in the medical devices industry. Indian medical device market is expected to grow US\$ 25 billion by 2025. Medical devices industry in India has been growing 15.2% annually and is expected to reach US\$ 8.16 billion by 2020 and US\$ 25 billion by 2025. India is also among the Top 20 markets for medical devices in the world, and the fourth largest device market in Asia.

The country has also become one of the leading destinations for high-end diagnostic services with tremendous capital investment for advanced diagnostic facilities, thus catering to a greater proportion of population. Besides, Indian medical service consumers have become more conscious towards their healthcare upkeep.

The diagnostics industry in India is currently valued at \$4 bn. The share of organized sector is almost 25% in this segment (15% in labs and 10% in radiology). Hospitals and diagnostic centers attracted Foreign Direct Investment (FDI) worth US\$ 6.72 billion between April 2000 and March 2020, according to the data released by Department for Promotion of Industry and Internal Trade (DPIIT).

Diagnostic imaging was expected to grow at a CAGR of 7.1% during 2015-2020. India's surgical robotics market is estimated to expand at a CAGR of 20% (2017-25) to hit the size of \$350 mn by 2025. Orthopaedic prosthetics and patient aids segments will be the two fastest-growing verticals by 2020 and are projected to grow at a CAGR of 9.6% and 8.8%, respectively.

Many R & D institutes are involved in educational and screening efforts to ensure prevention of disease at early stage. Regenerative medicine such as gene therapy and tissue engineering have shown encouraging results with wide range of cancers including lung cancer, pancreatic cancer, prostate cancer, and malignant melanomas.

At least 12 companies across India are in the process of developing liquid biopsies to identify cancer cells and tumours. Nanotechnology is being actively resorted to by researchers to selectively treat cancer cells and enhance the efficacy of certain treatments.

Development in information technology (IT) and integration with medical electronics has made it possible to provide high quality medical care at home at affordable prices. It enables the customers to save up to 20-50% of the cost. The home healthcare market is estimated to reach US\$ 6.21 billion by 2020 from US\$ 4.46 billion at the end of 2018.

Some leading hospitals resort to artificial intelligence based novel breast cancer screening solutions. Clinicians are now resorting to machine learning which they believe will enable them to develop patient-specific cancer treatments by analysing individual biology. Organ-specific cancer treatment is another insightful procedure which is gaining much success in India. Next Generation Photodynamic Cancer therapy (NGPDT) is a new technology which treats almost every type of cancer.

## 4.1 POLICY SUPPORT

The Union Cabinet has given its nod for the amendment of existing Foreign Direct Investment (FDI) policy in the pharmaceutical sector in order to allow FDI up to 100% under the automatic route for manufacturing of medical devices subject to certain conditions

## 1.2 WAY FORWARD

With an ageing population and life expectancy to cross 70 years by 2022, there is a need for home-based healthcare devices. According to the United Nations, India's population is set to touch 1.45 billion by 2028, making it the world's most populous nation (India Health, 2019).

In the next few years, however, analysts expect the diagnostics industry will get consolidated as major diagnostics chains work on building their hub and spoke structures – acquiring smaller, independent players or enabling private pathology labs and radiology centers to become franchisees of the larger players.

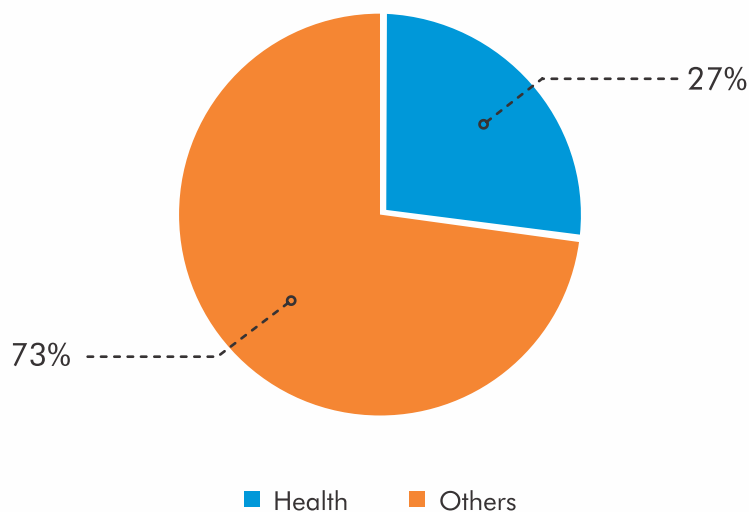
### 4.3 INVESTMENTS

- The acquisition of four laboratories in Surat, Gujarat for a combined consideration of INR 180 million (US\$2.39 million), by Carlyle backed Metropolis Healthcare Ltd.
- Israel and India are conducting trials on a large sample of patients for four different kinds of technologies that have the potential to detect COVID-19 in about 30 seconds, including a breath analyser and a voice test.

## 5. HEALTH INSURANCE

India's health insurance ecosystem consists of multiple stakeholders - insurance companies, beneficiaries, provider hospitals, third-party administrators, intermediaries, reinsurers, InsurTech (internet-first insurance platforms), startups, diagnostics, pharmacies, value-added service providers, government regulators, and government-funded social insurance schemes.

Break-up of India's non-life insurance market



Health insurance is gaining momentum in India. Gross direct premium income underwritten by health insurance grew 17.16% y-o-y to Rs 51,637.84 crore (US\$ 7.39 billion) in FY20. Gross direct premium from health insurance reached Rs 516.37 billion (US\$ 7.33 billion) in FY20 and contributed 27% to the gross direct premiums of non-life insurance companies in India. Another boost to the sector will be the National Health Protection Scheme under Ayushman Bharat, announced in Union Budget 2018-19. The scheme was launched in September 2018.



Currently, government health insurance companies cover 15% of the population, and 2% are covered by private health insurance. The penetration of health insurance will significantly increase the affordability of healthcare services for the population. Several private insurance companies have entered the market and have empowered hospitals to provide cashless treatment to subscribers of insurance companies.

The surge in claims arising due to the COVID-19 pandemic across the country has resulted in several insurers entering into strategic partnerships with established companies to offer COVID-19 insurance plans. New policies floated cover cost of PPE kits and other expenses incurred during COVID-19 treatment and have attracted significant interest given the widespread nature of the outbreak in India. In June, the industry regulator, Insurance Regulatory and Development Authority of India (IRDAI), published its guidelines for COVID-19 standard benefit-based and COVID-19 standard indemnity health policies. Health and general insurance providers have been mandated to offer the indemnity policy (India Briefing, 2020).

### 5.1 AYUSHMAN BHARAT

On September 23, 2018, Government of India launched Pradhan Mantri Jan Arogya Yojana (PMJAY), to provide health insurance worth ₹500,000 (US\$ 7,124.54) to over 100 million families every year. The Government has announced ₹69,000 crore (US\$ 9.87 billion) outlay for the health sector that is inclusive of ₹6,400 crore (US\$ 915.72 million) for PMJAY in Union Budget 2020-21.

As of July 2019, the scheme enrolled 16,085 hospitals, including 8,059 private hospitals and 7,980 public hospitals. It included 19 AYUSH packages in the treatment scheme. As of November 2019, nearly 63.7 lakh people received free treatment under PMJAY. Ayushman Bharat scheme will provide health coverage of up to ₹5 lakh per family per year for secondary and tertiary care hospitalisation. This will cover over 10 crore families from financially backward and vulnerable classes, including 50 crore beneficiaries. Ayushman Bharat - National Health Protection Mission subsumed on-going centrally-sponsored schemes-RSBY and Senior Citizen Health Insurance Scheme (SCHIS).

### 5.2 WAY FORWARD

Significant opportunity for innovations will emerge in network design and products. For example, insurers will steer towards lower-cost and higher quality providers. New products such as OPD insurance and gamifying premium pricing linked to healthy patient behaviors will become possible. Margins will improve due to a reduction in both medical expenses (rising from improved care quality and better care coordination) and administrative burden (rising from standardized claims platform) (BCG, 2020). Payors will have to bolster and expedite their initiatives focusing on innovations and margin improvement.

## 6. HEALTH INFORMATION SYSTEMS

Most private healthcare providers, at least the ones in tier 1 and tier 2 cities, have adopted foundational technologies such as HIS, ERP, appointment booking, RFID asset tracking, etc. With the release of EHR standards for India, private healthcare providers have now shifted their focus to EHR adoption. Digital Health Knowledge Resources, Electronic Medical Record, Mobile Healthcare, Electronic Health Record, Hospital Information System, PRACTO, Technology-enabled care, telemedicine and Hospital Management Information Systems are some of the technologies gaining wide acceptance in the sector.

## 7. DOING BUSINESS IN INDIA

Today, India is a part of Top 100 Club on Ease of Doing Business (EoDB) and globally ranks 77th out of 190 nations. It also ranks 1st in the greenfield FDI ranking. India received foreign direct investments worth US\$ 42 billion in 2018, according to the United Nations. FDI is permitted up to 100% in greenfield projects in healthcare and up to 74% in brownfield projects under automatic route and beyond 74% in such projects requires government approval.

## 8. KEY PROJECTS

Invest India, the National Investment Promotion and Facilitation Agency of India highlights some of the upcoming hospital projects in the country:

- \$243.74 million setting up of a 500-bed multi-speciality hospital in Dharamshala
- \$139.28 million medical equipment manufacturing project in West Sikkim
- \$96.52 million super-speciality hospital project in Mumbai
- \$87.75 million medical centre project in Guwahati

Invest India also outlines some of the latest FDI projects in India:

- Japanese venture capital firm SBI Investment has invested \$ 17.2 million in Bengaluru-based healthtech AI startup mfine. mfine will use the funds to expand its hospital network across the country and build its AI technology
- Amway India to invest up to \$4.17 million to ramp up its digital platform
- World Bank extends help to develop 7,500 health centres in Andhra Pradesh
- Aster DM group plans to invest \$59.6 million in Chennai to launch a 500-bed multi-speciality hospital
- Metropolis Healthcare plans to add 800 centres and ten labs by the end of 2019

Recent training and education opportunities in India include:

- Setting up colleges for state governments
- Consultancy in establishing and delivering care programmes for private hospitals
- Training and accreditation for doctors and allied professionals in new hospitals
- Collaboration on emergency medicine for private hospitals
- Dental training
- Training in counselling

There is huge interest in how to improve the quality and productivity of healthcare. Healthcare agencies and organisations want to benefit from developed countries' expertise in areas as diverse as cancer screening, ambulance services, cloud based clinical records, remote radiology, assisted living and infection control. There is the opportunity to set up a complete hospital operation in India with Indian investors.

There is Indian interest in services for children with mental health problems and the new developments around care and treatment - services for children with, for instance, behavioural and neurodevelopmental conditions like ADHD or autism. It's an issue of growing concern in India, which is only just beginning to get to grips with this type of condition, and with the need to fund extra training, research and education.



Other discussions have focussed on setting up a network for research and development. India is remarkably forward-thinking and innovative when it comes to healthcare, and has some truly world-class hospitals which can partner with the Canada. Collaborations in a range of areas have been discussed, including clinical research and healthcare delivery, but also high-end services like complex liver transplants. There is also great interest from Indian hospitals in fertility treatment around new developments and training in the sector.

There are opportunities for specialist digital healthcare companies, developing systems to help monitor people's health using smart phones. There is also enormous interest In India in how to improve the general cleanliness and hygiene in hospitals.

## 9. RISING COSTS

World Health Organization (WHO) defines health as a "State of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity." Health is not a static condition, and it changes in relation to one's physical and mental ability to adjust and adapt to external factors. In this sense, healthcare covers not just medical care, but many aspects of preventive care as well.

Healthcare is financed by both public expenditure as well as self-care and care paid for by private citizens. It includes hospitals and other healthcare facilities, pharmaceuticals, diagnostics, clinical trials, telemedicine and m-health, medical tourism, medical insurance, and medical devices and equipment, among others.

Healthcare costs have been rising in recent years - specifically in developed countries, raising fears that these costs are likely to hit prohibitive levels despite growing disease burden due to longevity and prevalence of NCDs (EY and FICCI, 2016). With the novel coronavirus (COVID 19) pandemic raging across the globe, taking its toll on populations and economies, these issues assume renewed significance.

## CENTRE FOR DEVELOPMENT POLICY AND PRACTICE (CDPP)

The Centre for Development Policy and Practice (CDPP) is a research group that focuses on development concerns and contemporary public policy challenges.

Working with a team of research professionals and expert consultants, under the guidance of eminent public intellectuals, CDPP conducts research studies, develops policy papers, publishes a peer reviewed quarterly Journal and hosts Conferences, Seminars and Workshops.

### CDPP - GOVERNING COUNCIL

1. G. Sudhir is a former IAS officer. He was Chairman of the Commission of Inquiry to study the Socio-economic and Educational conditions of Muslims in Telangana.
2. Amir Ullah Khan is Research Director at CDPP and a Development Economist. He teaches at ISB, IIFT, NALSAR, MCRHRDI and TISS.
3. Neelima Khetan headed the CSR division for companies like Coca-Cola, the Vedanta Group and Hindustan Zinc Limited. She is now visiting fellow at Brookings India.
4. Amitabh Kundu has been chairperson of the Post-Sachar Evaluation Committee set up by Ministry of Minority Affairs. Currently, he is chairs a Committee for Swachh Bharat Mission at the Ministry of Drinking Water and Sanitation.
5. Aalok Wadhwa is a management professional with more than three decades of experience working in FMCG, online and social media content, publishing, and retail businesses.
6. Saleema Razvi is a Research Economist at the Copenhagen Consensus Center. She has previously served in organisations like Indian Council for Research on International Economic Relations, Population Foundation of India, and UNICEF.
7. Abdul Shaban is a Professor at Tata Institute of Social Sciences. He has been a member of Post-Sachar Evaluation Committee, Chief Minister's High-Powered Committee on Muslims, Government of Maharashtra; and Sudhir Commission, Telangana.
8. Adeeluddin Syed is a Director at CDPP, and a philanthropist and social worker.
9. Jeemol Unni is a former Director of the Institute of Rural Management, Anand (IRMA) and RBI Chair Professor of Economics at IRMA. She is currently Professor at Ahmedabad University.


## CDPP - RESEARCH TEAM

1. G. Sudhir is Chairman of the Research Team at CDPP, and a former IAS officer.
2. Amir Ullah Khan, Research Director at CDPP, is a former Civil Servant. He has worked with Encyclopedia Britannica, India Development Foundation and the Bill and Melinda Gates Foundation.
3. Nahia Hussain, Vice President (Policy Affairs) at CDPP, has worked on diverse issues like Gender Rights, Sustainability, Foreign Policy, and Criminal Justice.
4. Sriram Bhupathiraju, Analyst at CDPP, is an anthropologist with an MPhil from IIT, Hyderabad.
5. Anjana Divakar is Research Associate at CDPP with a Master's in Public Policy from Jindal School of Government and Public Policy. She is Managing Editor of the Journal of Development Policy and Practice.
6. Samia Farheen is research intern at CDPP. She has a triple major in Psychology, Economics and Sociology from Mount Carmel College, Bangalore.
7. Syed Salman Uddin is research assistant at CDPP. He has a degree in mechanical engineering from JNTU.
8. Syed Moin Afroz is Lead Graphic Designer at CDPP. He has been a part of the design industry for a decade now.
9. Ismail Shaikh is an Editorial and Communications intern at CDPP.
10. Karapudi Himabindu, currently pursuing M.A. in Public Policy and Governance in Azim Premji University, Bangalore.

## INDO-CANADIAN BUSINESS CHAMBER (ICBC)

The Indo-Canadian Business Chamber (ICBC) is the only organization based in India which is dedicated to promoting Indo-Canadian economic and bilateral relations. ICBC works closely with the High Commission of Canada in India on core issues and initiatives related to bilateral trade in the India-Canada business corridor.

Since its inception in 1994, ICBC has contributed immensely to the ongoing increase of bilateral trade and its diversification by exchange of trade and investment delegations, power launches, interactive sessions and creating tie-ups with bilateral chambers of India's neighbouring countries like Nepal, Bhutan and Sri Lanka. It acts as a bridge between Canada and these adjoining countries and has signed MOU's with the Business Chambers of these countries. It also has a strong connect with the Chambers in Canada, namely Indo-Canada Chamber of Commerce (ICCC) and C-IBC (Canada-India Business Council)



The CDPP brings out a monthly working paper based on the research work being carried out here. These are published on our website [www.cdpp.co.in](http://www.cdpp.co.in) and sent to a select group for review, comments and critique.

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