



Confederation of Indian Industry

The Indian services sector: Poised for global ascendancy

April 2016

Foreword – Commerce Secretary

1. The services sector is a significant player in terms of its contribution to national and state income, trade flows and of course, FDI inflows. The sector has matured considerably over the past few years, and today, it plays a distinctive role in integrating the global economy.
2. The importance of trade in services is significant in promoting not only greater foreign investment, but also fostering overall economic growth. Efficient services industries, supported by an effective domestic regulatory regime, are an integral part of economic growth.
3. The WTO has been instrumental in the growth in the global trade of services. However, though there has been significant progress in the trade of services through the GATS framework, there is still significant scope for further facilitating the trade of services.
4. Parallel to the Trade Facilitation Agreement (TFA) in goods, which is aimed at streamlining customs rules and procedures across countries and reducing transaction cost by expediting trade flows, facilitation in services trade can be beneficial for both developing and developed countries. It is perhaps time to bring the issues pertaining to services trade, centre stage at WTO.
5. Beyond multilateral fora like the WTO, the impact of bilateral and regional Free Trade Agreements (FTAs) as an instrument of trade policy is significant, especially as a means to expand trade and increase regional integration, particularly in the context of the slow progress of the Doha Round of negotiations at WTO. Further, FTAs can enable businesses to export services through all four modes of export more effectively. India is open to stand alone limited PTAs of the services pillar.
6. In order to promote the global trade in services, it is important to have forums where both businesses and governments can build partnerships. The first edition of the GES, held in April 2015, was a step in this direction, and received a positive response, with participants from over 60 countries, 350 exhibitors and more than 3,000 828 meetings taking place during the event.
7. The second edition of the GES is being held from 21 - 23 April 2016, with the aim to give Indian services the global visibility they deserve. The focus sectors are IT, Healthcare, Education, Travel and Tourism, Logistics, MRO, Media and Entertainment, Space, as well as the professional services of Accounting and Auditing, Management Consulting, Architecture and Engineering, and Legal services. There is also a focus on SMEs, which form the backbone of many service sectors such as tourism, professional services and logistics.
8. The GES-2016 is expected to serve as a forum for both domestic and global businesses to come together and build on the opportunities available for this sector globally including in India. I wish all participating countries, business houses and research organizations every success.



Rita Teaotia
IAS
Commerce Secretary

A stylized, handwritten signature in white ink, consisting of a large 'R' followed by a horizontal line and a small upward stroke.

Rita Teaotia

Foreword – CII

Technology, innovation and creativity are rapidly redefining the global economy with digitization collapsing distances and transcending borders. In the process, the impact of the services sector is turning out to be manifold and significant. At a worldwide level, services now make up almost as much as 60-65 per cent of the global economy.

As a sector, services are increasingly becoming critical to the development trajectory of a country. The World Bank has found that the sector contributes more to poverty alleviation than agriculture or manufacturing.

In the services landscape India has pride of place as the fastest-growing service sector nation globally. The share of India's services exports in global services exports, at 3.2 per cent in 2014-15, was nearly double that of its merchandise exports in global merchandise exports at 1.7 per cent.

Services remain the key driver of India's economic growth, being the backbone for steady and robust progress. The sector contributed 66.1 per cent of the gross value added growth in 2015-2016. It is also a major source of employment, with about 28 per cent of the workforce deriving livelihood from this occupation.

The services sector is hugely diverse and caters to a wide set of skill and technology levels, from activities such as trading, education and retail to sectors such as financial services, space research, IT, and media and entertainment. Given India's favorable demographic profile and growing education and skill attainments, the global services market offers big potential for India.

We occupy the eighth place currently amongst the top ten exporters of service in the world. We need to strive harder to place ourselves at the top of the services market. A services-driven development strategy centered around leveraging global markets bears high potential for creating new jobs as also attracting FDI. A comprehensive policy framework aligned to national development objectives and linked to policies in other areas including education, manufacturing and innovation needs to be designed and implemented.

What is critical that stakeholders, investors and policy-makers are up-to-date with the current statistics in the Indian services landscape to be best equipped thereafter in strategizing for the future and tapping the best markets globally. With this in mind, CII is proud to partner with KPMG for the Services Report for 2016 and we hope this would be fruitful for future business.

It is our privilege to release this important report at the prestigious platform for the Global Exhibition on Services (GES) organized jointly by the Ministry of Commerce and Industry, Government of India, Services Export and Promotion Council (SEPC) and Confederation of Indian Industry (CII). The goal of GES is to provide a strong fillip to the worldwide services sector becoming a forum for trade, knowledge exchange and fresh partnerships between countries, businesses and stakeholders.



Chandrajit Banerjee

Director General,
Confederation of Indian
Industry

Foreword – Richard Rekhy

To attract the attention of global companies, India has been working hard toward establishing a sound business environment. It is not only confident of achieving so, but also harbours the ambition of contributing to the global economy in many ways. Following this, the world wants to know India better and about its myriad performing sectors. As India's manufacturing is getting recognised for the opportunities it provides to the world, the services sector, too, can continue to play a pivotal role, and contain the cyclical economic risks at a distance. India has emerged as one of the top-10 services exporters in the world, and at this moment, the focus needs to be toward gaining further prominence across the economic landscape of the world.

Although many of the initiatives launched by the Government of India aims to propel India's manufacturing, the services sector is also expected to gain a significant mileage. Many initiatives, such as Skill India and Start-Up India, are going to help India strengthen its skills to deliver strongly to the domestic demands, while creating its niche in the international markets. A strong services sector, along with the manufacturing pitch that India is making, would drive the economy to an important position on the world stage at par with the developed nations.

The second edition of Global Exhibition on Services (GES) is being organised by the Ministry of Commerce and Industry, in association with the Confederation of Indian Industry (CII) and the Services Export Promotion Council (SEPC). With the success of its first edition held last year, I believe that the 2016 edition would not be any different. This year, 60 countries are expected to attend this mega event, which is focussing on 15 sectors. GES is definitely emerging as an apt platform to showcase the best of India's services industry to the world. I am elated as KPMG in India, through this report, *The Indian services sector: Poised for global ascendancy*, has highlighted significant opportunities for our economy in the current scenario that could be leveraged by tapping our country's demographic dividend.

This report gives a holistic viewpoint about several opportunities that could help generate job opportunities, and simultaneously, establish India's global service delivery road map. I hope this report acts as a pathfinder for entrepreneurs and the state governments to leverage the scope in services, to transform the domestic business and export dynamics of the country in sync with other performing sectors of the world.

The current phase is a good time for India to benchmark itself as a global service provider. India is certainly poised to contribute a lot more to the world economy. I am sure this goal would be realised sooner than later.



Richard Rekhy
CEO
KPMG in India

Foreword – Rajat Wahi

Given that the manufacturing sector acts as an agent of economic development, services today deliver a higher per capita GDP and have the potential to boost growth and development in the emerging economies such as ours.

The services sector in India has surpassed agriculture with a greater share of GDP and the country has evolved from being an agrarian to a services-based economy. In the year 2014-15, the services sector contributed about 61 per cent to India's GDP, growing strongly at approximately 10 per cent per annum, placing India among the top-10 countries around the globe in terms of services. The industry has not only grown domestically, but also capitalised on opportunities in areas such as IT, software and BPOs globally.

India's young demographic profile combined with its rising literacy rate, offers it a significant competitive advantage vis-à-vis other developing economies. This demographic dividend could be leveraged through various initiatives launched by the government to propel development across the sectors. Further, along with the Make in India initiative that is striving to boost the manufacturing sector, the Prime Minister has outlined a vision to represent India as a world-class services hub across sectors such as healthcare, tourism, education, space, and R&D, in addition to IT, software and BPOs.

In order to showcase India's strengths in the services sector and the many opportunities it presents, the Ministry of Commerce and Industry in association with the Confederation of Indian Industry (CII) and SEPC have organised the second edition of the Global Exhibition on Services (GES), to be held in Greater Noida. Following the success of the first edition last year, this year's exhibition is expected to be even larger, with the event becoming one of the largest exhibitions on services in the world.

KPMG in India is proud to work with the Ministry of Commerce and Industry and CII for this mega event, and we have prepared a thorough report highlighting the opportunities in this sector. We strive to emphasise on the strengths of various sectors in India and the opportunities available to export their services globally. I am confident that this report shall enable various stakeholders such as the services industry, the government as well as the private sector to come together to formulate a plan and initiate action to put the country on a higher growth trajectory.



Rajat Wahi

Partner and Sector Head,
Consumer Markets
KPMG in India



Context

The services sector in India has seen rapid growth in the last two decades, making India the second fastest growing services economy in the world. From an agrarian economy in the 1980s, India has transformed itself into a services-driven economy, which contributes to around 61 per cent of GDP. With this scale and growth, this sector is strategically important to the country, since it contributes significantly to foreign investment flows, forex earnings and employment generation.

To give a fillip to this sector, the Government of India has undertaken various initiatives to propel its growth. Amongst the several initiatives, the 'Make in India' and 'Digital India' initiatives are gaining importance and are expected to have a positive impact on the expansion of the services space in India. Besides, the government has also announced a few initiatives in the Union Budget 2016 to help the sector grow. However, a lot more needs to be done to unravel the true potential of the Indian services sector – be it in the domestic market or fulfilling international demand. A clear long-term vision for each of the key services, a road map to achieve the vision, development of a conducive growth ecosystem, responsibility assignment and constant monitoring with reality checks need to be in place.

Additionally, multiple stakeholders need to work cohesively and arrive at relevant recommendations for development of policies. With this objective, the Ministry of Commerce and Industry in association with the Confederation of Indian Industry (CII) and Services Export Promotion Council (SEPC) are organising a Global Exhibition on Services (GES) which they hope will serve as a platform to enhance cooperation and develop synergies between the participants of the services sector in India and their global counterparts.

This publication explores the landscape of key services sectors, such as IT, telecom, tourism, media and entertainment, healthcare, logistics and professional services; and their performance thereof, in a bid to greatly empower participants to engage in debates and discussions that are expected to take place at the event. The report aims at providing a wide-ranging view on the current state of the aforementioned sectors in India, highlighting their performance in the past few years, the scenario pertaining to exports, strategies that have fuelled sector growth in the past, the competitive landscape within each sector, government initiatives and lastly, sector expectations from the government to drive growth.

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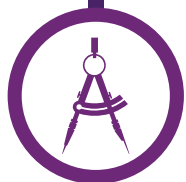
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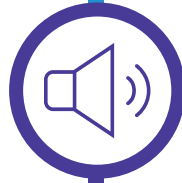
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Executive summary

Technology



The Information Technology-Business Process Management (IT-BPM) industry is the largest private sector employer in India, employing more than 3.7 million people

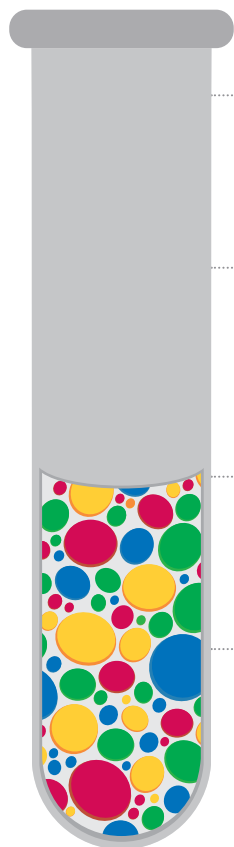
The industry is projected to grow at 8.5 per cent in FY2016, from USD132 billion in FY2015 to USD143 billion (excluding e-commerce)

IT-BPM exports in FY2016 are estimated at USD108 billion

The major markets for IT software and services exports are the U.S. and the U.K. and Europe, accounting for about 80 per cent of the total IT/ITeS exports

Within the IT-BPM sector, IT services are being driven by an increase in the usage of services pertaining to the adoption of Social, Mobile, Analytics and Cloud (SMAC), while BPM is driven by automation and analytics.

Healthcare services



The Indian healthcare sector is forecast to reach USD160 billion in 2017, accounting for about 4.2 per cent of GDP, and is poised to grow to USD280 billion by 2020.

India is emerging as a destination for quality healthcare services at an affordable price. It offers an attractive value proposition with multispecialty private healthcare services being provided to medical tourists at a fraction of the cost. The presence of highly qualified doctors, nurses and other healthcare staff, and availability of medical visa service with visa-on-arrival issued to 150 nations, strengthens India's position to provide healthcare services to the world.

With the launch of the 'Digital India' initiative, the government is stepping towards digital empowerment. India is expected to be a leader in IT use in healthcare (e-health) by 2019. Indian telemedicine, though in its nascent stage, is showing robust growth at approximately 20 per cent, and is projected to grow from USD8 million in 2012 to approximately USD19 million by 2017

India's traditional strength in yoga and ayurveda adds a distinct angle to the country's medical value travel proposition. The escalating costs of conventional healthcare, epidemiological transition to non-communicable diseases and the adverse effect of chemical-based drugs have led to a surge in the demand for Ayurveda, yunani, unani, siddha, and homeopathy.

Tourism services

The tourism sector's contribution to GDP was USD125.2 billion in 2014, and is expected to reach USD259 billion in 2025 (accounting to 7.6 per cent of India's GDP)

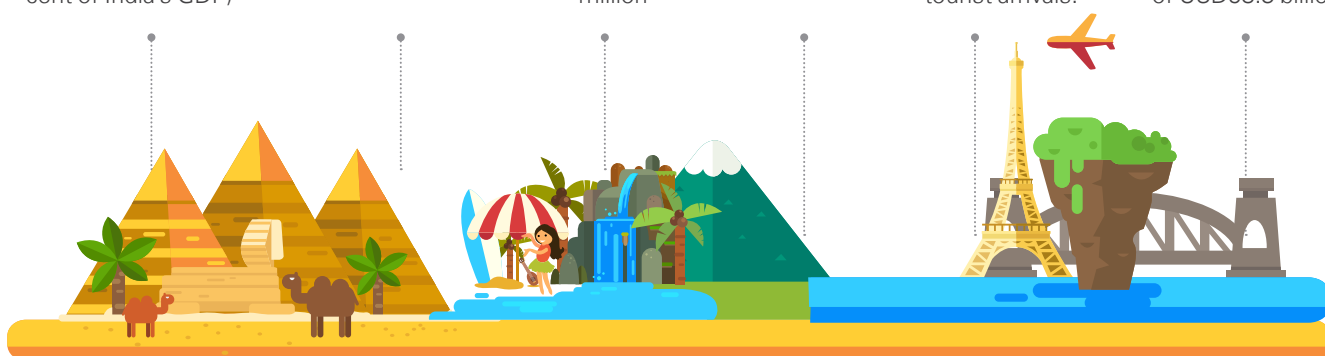
In 2015, India is estimated to have received USD109.6 billion in revenue from domestic and foreign tourists

During January-September 2015, the tourism sector (including hospitality) received FDI worth USD750 million

India invited around 7.8 million foreign visitors in 2015

Government initiatives, such as e-Visas and expansion of visa-on-arrival facilities are expected to fuel further foreign tourist arrivals.

India's tourism sector's contribution to the global GDP was USD125.2 billion in 2014, over double the global average of USD58.3 billion



Accounting and audit

India has emerged as a preferred destination for business in the accounting and auditing sector, owing to intensification of merger and acquisition activities, implementation of the Companies Act and convergence of Indian Accounting Standards (Ind AS) with the International Financial Reporting Standards (IFRS)

The country's accounting and auditing sector revenue increased 15 to 17 per cent during the period 2013-14 on account of increasing Foreign Direct Investment (FDI) and growing business activities in the country

The convergence of IFRS with Ind AS, beginning April 2016, is expected to create greater opportunities for Micro, Small and Medium Enterprises (MSMEs) in the sector, on account of standardisation of global accounting norms.



Architecture and engineering



The production of architectural and engineering services in India was estimated at USD888 million in 2014, and is expected to grow at a CAGR of 14.2 per cent to reach USD1.5 billion by 2018

The sector is expected to grow at 14 per cent per annum, due to expanding urbanisation and increasing government spend

As of 2015, there were approximately 73,000 architects practicing in India

India's exports in architectural and engineering services were estimated at USD6.9 million in 2014. Exports grew at a significant rate (CAGR of 34 per cent) over the past five years.

Legal



The Indian legal services market expanded by 16 per cent during 2007–12, to reach a value of USD6.8 billion in 2012. The market is expected to grow at a CAGR of 14.9 per cent between 2015 and 2018

India has 600,000 legal professionals in the world, the second-highest after the U.S., with most of them being employed in small firms, across 500 legal practices

In India, about 18,000 professionals are expected to be engaged in the Legal Process Outsourcing (LPO) industry by the end of 2015, with the total revenues of USD960 million.

Management consultancy



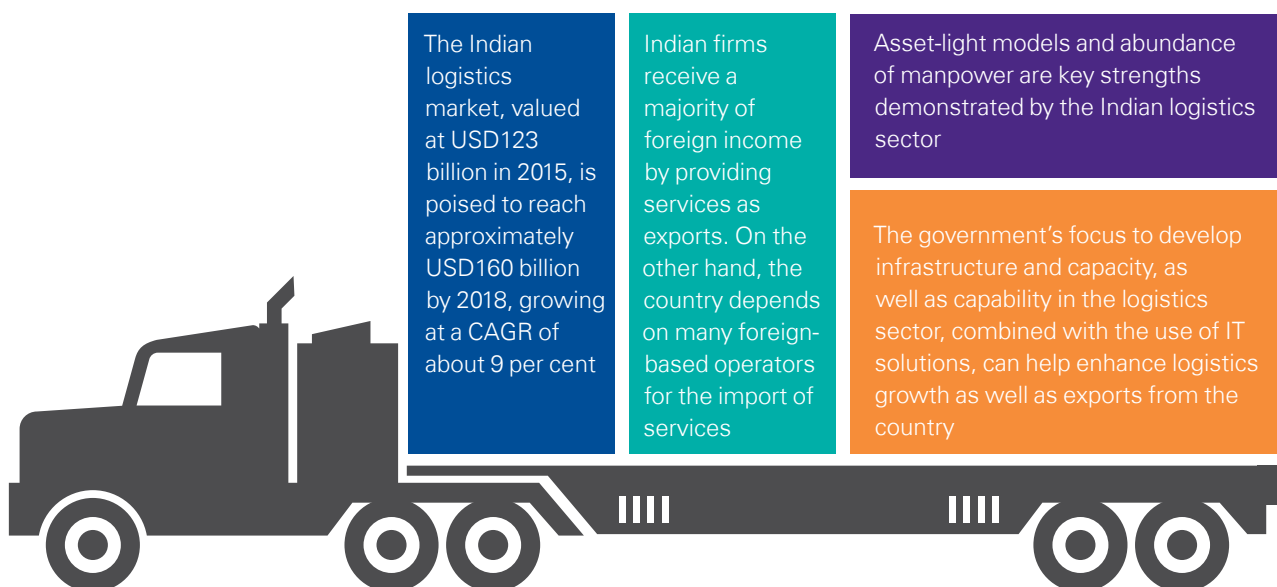
The global consulting market was estimated to be worth USD234 billion, in 2014. Operations consulting, financial advisory and IT consulting, contributed about 74 per cent of the total market size

Consulting services evolved as one of the fastest growing business services in India; the annual production turnover of the Indian business and management consulting was estimated to be USD3.5 billion in 2014, registering a CAGR of 9.6 per cent during 2010–14

The total number of employees engaged in business and management consultancy industry in India, reached 213,260 in 2014 from 152,620 in 2009

India has evolved from being a net importer of professional and management consulting services, in FY11-12, to become a net exporter, from FY13. Services exports stood at USD14.4 billion, in FY15.

Logistics



The Indian logistics market, valued at USD123 billion in 2015, is poised to reach approximately USD160 billion by 2018, growing at a CAGR of about 9 per cent

Indian firms receive a majority of foreign income by providing services as exports. On the other hand, the country depends on many foreign-based operators for the import of services

Asset-light models and abundance of manpower are key strengths demonstrated by the Indian logistics sector

The government's focus to develop infrastructure and capacity, as well as capability in the logistics sector, combined with the use of IT solutions, can help enhance logistics growth as well as exports from the country

Education

The education and skill development sector was valued at USD46.7 billion in 2014

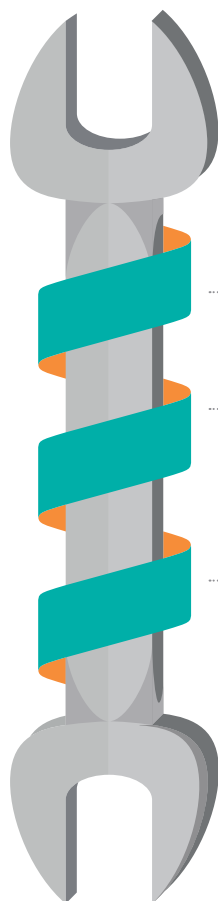
Increasing private participation in the sector could be a key factor to drive further growth



Quality of faculty could be a key differentiator when projecting India as the preferred provider of education

There is ample scope for export of services in higher education by attracting foreign students to India.

Maintenance repair and operations (MRO)

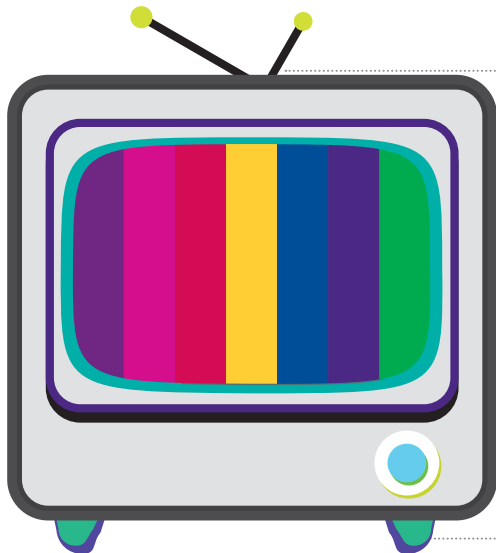


The Indian civil aviation MRO market stood at an estimated USD1.2 billion in 2015, and is expected to reach USD4.3 billion by 2025

Government initiatives, such as duty exemption for capital goods and imported materials for repair of ships, reduction of import duty on spare parts, tax benefits, and a liberalised FDI policy are expected to boost investments in the MRO sector

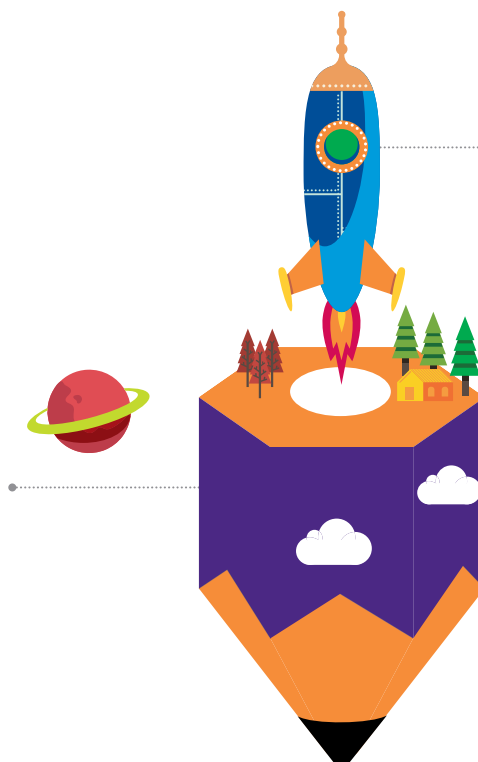
Indian MRO exports reached USD186 million in 2014 from USD77 million in 2012.

Media and entertainment



- The Indian M&E market size was USD17.1 billion in 2014, which is expected to grow at a rate of 14 per cent annually between 2014-19 to USD33 billion
- The sector is the fourteenth largest in the world, and contributes about 1.7 per cent to the country's GDP
- An estimated 0.7 million people are expected to be employed in the M&E sector by 2017
- There is a gamut of high quality services available at flexible pricing options in the industry, with some of the major services being content production, animation, game development, post production and VFX, and digital advertising
- Animation and visual effects services delivered from India are 40 to 60 per cent lower in costs than those in developed regions.

Space



In FY17, India's budget estimate towards the space sector is expected to amount to USD1.1 billion.

India has launched 40 satellites for 19 countries

The twelfth five-Year Plan includes 25 launch vehicle missions and 33 satellite missions

ITeS-BPM sector



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Information Technology – Business Process Management sector



1.1 Current state of the Indian IT-BPM sector

India continues to be a leader in the global IT-BPM arena and underlines its distinctive position as one of the only country that offers hardware and software manufacturing as well as IT services. In the current fiscal, the industry is pegged to grow at a rate of 13 per cent over the previous year to reach USD146 billion.¹ Exports are expected to touch USD98 billion in FY15,² further signifying the crucial role of the technology sector in the economy.

India has been rapidly moving upwards on the technology adoption curve to innovate and deliver leading services. It has excelled in business delivery and served as one of the most attractive offshore delivery centres among other nations. It also serves as a hub for budding start-ups, focusing on developing innovative solutions and collaborating with larger firms to meet the current needs of the industry. Last year, the government showed a keen interest in start-ups by introducing new initiatives such as Digital India, Smart Cities and Make in India, which have attracted huge investments from IT giants and government bodies, worldwide. This year, in a bid to foster growth in the start-up landscape, the government aims to facilitate the registration of companies within a day.

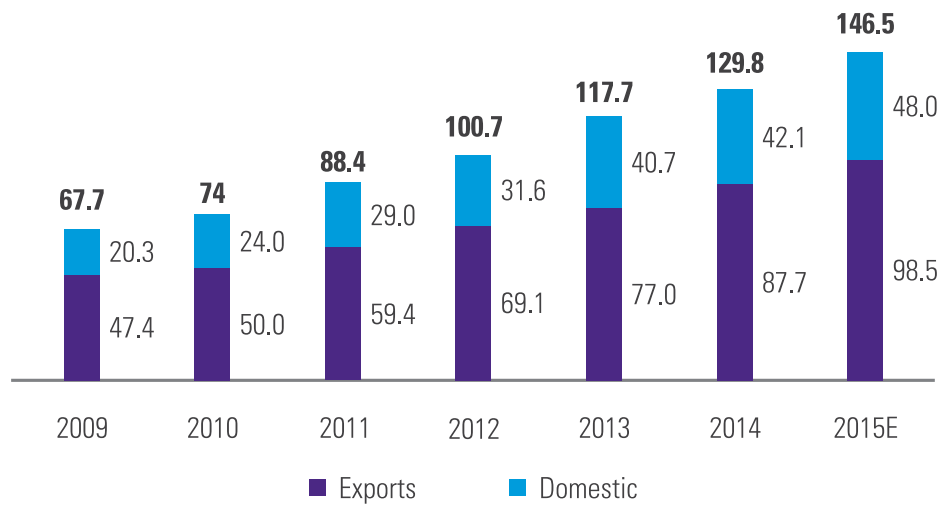
The current focus of the IT sector is on the use of artificial intelligence and cloud-enabled services. With the increased need for automation, the threat in the coming years is expected to be on the reduction of human resource demand in the BPO industry. However, there might also be an expected increase in the demand for professionals in digital services. Next year, a slight decrease in the technology service exports is expected from India due to macroeconomic headwinds.

According to the Economic Survey 2015–16, the IT-BPM industry is the largest private sector employer in the country, employing more than 3.7 million people, with the share of women employees greater than 34 per cent. The industry employs over 170,000 foreign nationals and a big chunk of the employees in this industry belong to non-tier I Indian cities.

Coming to technology services exports, India enjoys a cost advantage over other nations. According to NASSCOM, tier-I cities in India, such as Bengaluru, are 8–10 times more cost-efficient than other low-cost destinations. A few initiatives taken within the industry are the adoption of the hourglass model for employees instead of the traditional pyramid model, handling of multiple clients by a single project manager and moderate wage inflation.

Source: 1,2 NASSCOM Strategic Review 2015, NASSCOM

Indian IT-BPM (domestic + exports) revenues (USD billion)



Source: NASSCOM strategic report 2015, NASSCOM strategic report 2014



Demand side



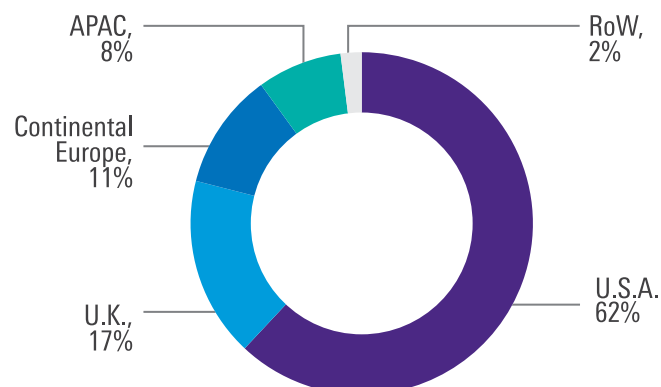
2.1 Exports market

The landscape of Indian IT-BPM is dominated by exports, mainly to the U.S. The FY13 exports closed at USD76 billion,³ which was approximately 70 per cent of the total revenue from exports that year. The number for FY14 was USD88 billion,⁴ which was approximately 68 per cent of the year's total revenue. There was a growth in exports of approximately 16 per cent y-o-y. In FY2015, exports are expected to touch USD 98 billion,⁵ which is an approximate 12 per cent increase as compared to FY2014. In FY2015, the domestic market is expected to grow at 50 per cent y-o-y driven by e-commerce, which has attracted foreign funding. Another reason for this is the focus of the government on two initiatives that were launched in 2014 — Digital India and Make in India. Within the IT-BPM sector, IT services are being driven by an increase in the usage of services pertaining to the adoption of Social, Mobile, Analytics and Cloud (SMAC), while BPM is driven by automation and analytics. The major markets for IT software and services exports are the U.S., the U.K. and Europe, accounting for about 90 per cent of the total IT/ITeS exports. This trend towards a broader geographic market is positive for the industry as a means to accelerate growth opportunities by tapping new markets.

IT-BPM services offered by Indian organisations have the potential to make a mark internationally, especially in regions that witness high demand for such services. Philippines and Malaysia have low internet penetration and hence, technology services have a huge scope for growth in these two countries. The Government of Japan had come out with stimulus packages, which led to a positive effect on its IT services, making it a favourable destination for IT services exports. Mexico is another lucrative market that can be explored since it is developing

IT clusters throughout the country to offer IT services. Indonesia is also an attractive destination as substantial growth is taking place in its e-commerce space. Further, there is significant scope for IT solutions in Indonesia, since quite a lot of the Small and Medium Enterprises (SMEs) do not use them.

Estimated share of exports in FY15E



Source: NASSCOM strategic report 2015

India's exports in IT-BPM industry reached USD88 billion in FY2014, and are pegged to reach USD98 billion this year. In India, 80 per cent of the exports are generated by IT services and BPM, of which 56 per cent is from IT services.

| 2.2 Language requirements:

It is imperative for Indians to be well versed with foreign languages at an early age, to be able to beat competition and bring in business from lucrative nations. Countries like China and Japan are dependent on Vietnam for two kinds of language adaptability requirements — understanding the user requirements and system documentation and language applicability for user interface. Even now, several documents in Japan are produced in Japanese, which makes it impossible for Indians to comprehend the same, although translations can be made. This could be used as an example to popularise the concept of learning foreign languages and emphasising this at the elementary school level in India.

| 2.3 Mode-wise potential

1. **Cross-border:** India has been providing cross-border services to a lot of nations, including the U.S., the U.K., Continental Europe, APAC region, etc. The Indian IT industry has been catering to worldwide demands by developing more BPOs within the country to deliver across the value chain. In the past, some of the major challenges faced by Indian outsourcing providers in Europe are language barriers and data privacy directives. This limits the amount of work that flows into the country. The U.S.-EU Safe Harbour framework in Europe allows MNCs that do not have the requisite data protection measures in place, to transfer personal data to a country outside of the European Economic Area (EEA). Recently, the U.S.-EU Safe Harbour framework was invalidated by the European Court of Justice (CJEU). The potential impact of this was significant, since a large number of businesses use the Safe Harbour framework to legally transfer Europeans' personal data to the U.S. Many companies, even those belonging to sectors other than technology, need to make regular transatlantic data transfers. An example of this is the set of companies in Europe that need to transfer the employees' personal data to the U.S. for human resource purposes. This implies that there is a need for a detailed privacy legislation in India, which may be useful for accessing EU and the domestic regimes and also move to a Digital India.
2. **MoNP (Movement of natural persons):** This is one of the most dominating modes in the Indian IT-BPM companies handling projects in foreign countries. These companies send their employees to onshore locations for project delivery. In this mode, employees of IT-BPM companies are required to work on short-term and long-term projects on-site for a specific period of time depending on the needs of the project.
Immigration-related issues: The technology sector has faced multiple issues pertaining to immigration and visas. These could continue to plague the Indian IT services sector which is the largest user of H1B visas (67.4 per cent of the total 161,369 H1B visas issued in FY14 went to Indians) and is also among the largest users of L1 visas (Indians received 28.2 per cent of the 71,513 L1 visas issued in FY14). India's USD146 billion IT outsourcing industry has been a beneficiary of temporary U.S. work visas that are required by skilled foreign workers to work in that country. The employees working at client locations in the U.S. are issued H-1B visas, which have a cap of 65,000 a year. The U.S. Congress in recent months has been considering Bills that seek to triple the cap of H-1B visas to 195,000⁶.
3. **Social security agreement:** India makes a huge contribution to the U.S. social security system, amounting to about USD2-3 billion annually. This happens in the form of Indian nationals working there. Since many nationals spend less than 10 years – 40 quarters – the minimum time limit required to seek benefits under the U.S. social security system, a huge chunk of this amount is neither utilised by, nor refunded to them. On the contrary, there is a very small contribution from U.S. nationals working in India and their employers, to the Indian social security system, popularly known as the Public Provident Fund. Further, on completion of 58 years of age, U.S. nationals get back a large part of these contributions from their provident fund account. So, in effect, the contribution made by U.S. nationals benefits them eventually and the reverse scenario plays out in the case of Indians working in the U.S.
 In the last decade, with an increase in the number of Indian nationals working overseas, India has started signing bilateral social security agreements. For the last few years, India has been eager to sign an agreement with the U.S., while the U.S. is of the view that India's social security system is not compatible with their system in terms of coverage.

Souere: 6 <http://economictimes.indiatimes.com/nri/visa-and-immigration/as-barack-obamas-term-ends-immigration-and-visa-issues-may-hurt-indian-it-services-companies/articleshow/47579274.cms> (Please provide the date when this link was accessed.)

2.4 The top-five states/clusters for IT/ITeS: Delhi NCR, Karnataka, Tamil Nadu, Telangana and Maharashtra.

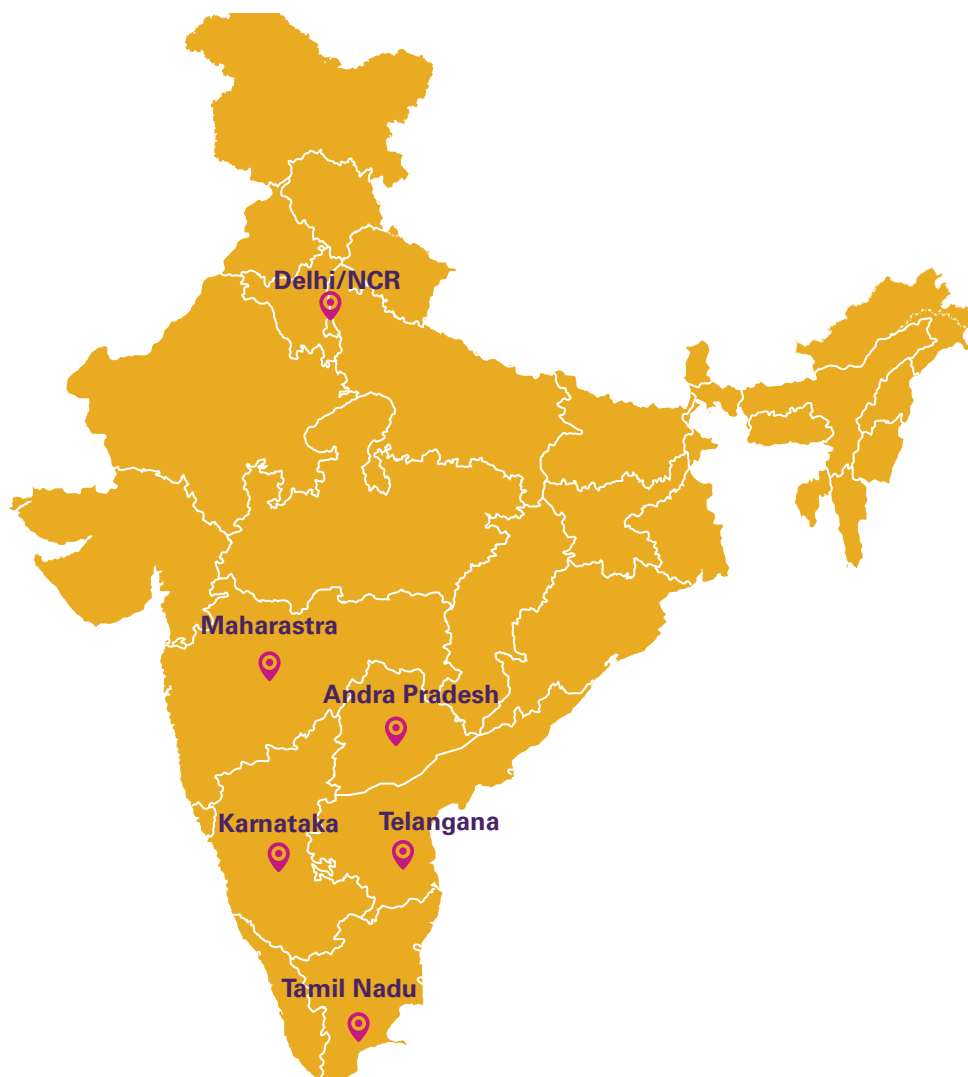
Karnataka: is one of the major sectors providing direct employment to more than 800,000 IT professionals. This state serves as a benchmark for others with 47 IT/ITeS SEZs, three Software Technology Parks (STPs) and dedicated IT Investment Regions (ITIR and a developed network of the physical, social and industrial infrastructure.

Maharashtra: Giving a push to develop the IT industry in the state, the Government of Maharashtra in its IT/ITeS policy 2009 made special provisions for the development of IT infrastructure. With 451 private IT parks approved, this sector in the state is expected to see investments up to USD2 billion and generate 1.6 million employment opportunities⁷.

Telangana: Telangana is one of the major IT hubs of the country. Out of the 115 SEZs, 32 are IT/ITeS SEZs. The state reports approximately USD5,000 million in revenue from the sector and provides employment to 3 million professionals.⁸

Delhi NCR: Noida and Greater Noida are the major IT hubs in the state of Uttar Pradesh. As of January 2013, there were 21 SEZs located largely in and around Noida and Greater Noida.⁸ With a spur in government incentives, this number is likely to increase steadily.

Tamil Nadu: Tamil Nadu enjoys the second position after Karnataka in software exports and provides employment to a large number of professionals in the IT/ITeS sector. The TIDEL Park in Chennai, with an area of 1.28 million square feet, is one of the largest IT facilities in India.



Source: 7 Maharashtra IT/ITeS Sector, http://midcindia.org/Lists/Profile%20List/Attachments/12/Maharashtra%20IT_ITeS%20Sector%20July%202013.pdf, MIDC, accessed 25 September 2015rm-ends-immigration-and-visa-issues- may-hurt-Indian-it-services-companies/articleshow/47579274.cms (Please provide the date when this link was accessed.)

8 Andhra Pradesh state portal, Factiva articles

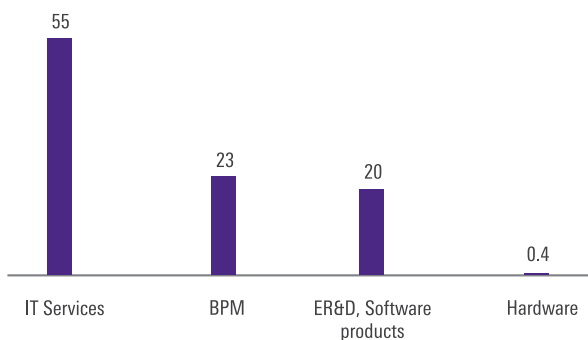
India's profile



3.1 Exports by service line

India's exports in the IT-BPM industry are projected at USD98 billion⁹ in FY2015. Of the total exports in India, 80 per cent are generated by IT services and BPM, of which IT services contribute a majority of about 56 per cent.

Exports by service line – FY15E (in USD billion)



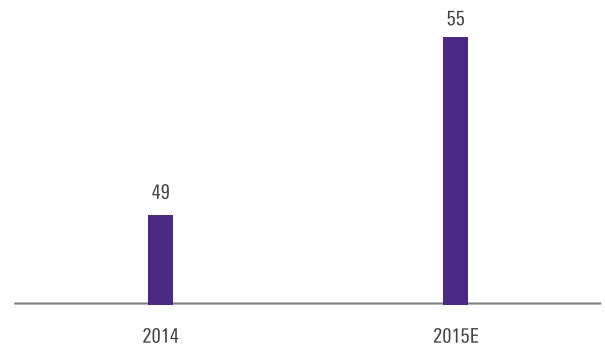
Source: NASSCOM strategic report 2015, NASSCOM strategic report 2014

3.2 IT services exports

The IT services segment in India is one of the largest segments and it grossed USD 49 billion in FY2014.¹⁰ It is expected to grow at the rate of 12 per cent this year to reach USD112 billion. Within IT services, Custom Application Development and Management (CADM) exports is a major contributor and is expected to reach USD26 billion in FY2015.¹¹ The demand is primarily driven by SMAC technologies, which have disrupted the segment by modernising legacy systems and bringing about a transformation in the system, Customer Relationship Management (CRM), increased demand for Enterprise Resource Planning (ERP) and mobility and user experience technologies. IT outsourcing is the fastest growing service lines as compared to the rest, and is pegged to reach USD11 billion in FY2015.¹² Majorly, this sector exports to the U.S., followed by the U.K. and Continental Europe, APAC and the Rest of the World (RoW). BFSI and emerging verticals such as healthcare, retail and utilities

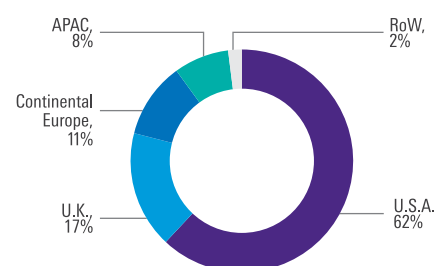
are major drivers for these services. The IT industry in India holds a 38 per cent share in the total services exports, which is the highest among all sectors.

IT services export revenue (USD billion)



Source: NASSCOM strategic report 2015

IT services exports by geography



Source: NASSCOM strategic report 2015

India is a popular source of IT service exports. The low cost acts as an initial bait and then clients continue to leverage India's capabilities for multiple reasons such as availability of skilled English-speaking manpower, high productivity, low turnaround time, delivery of services 24x7 coupled with its high quality. In addition, the government is lending strong support and providing a conducive policy environment, which has further enabled the country to attract foreign clients.

3.3 Domestic market as a 'consumer' of IT services

There is a surge in the domestic demand for IT services. This could be attributed to the following factors:

1. The government is focussing on a major shift towards e-governance through the automation and digitisation of both internal and external processes in public sector industries.
2. Following computerisation, banking industry processes are shifting to digital platforms like net banking, mobile banking, etc.
3. High penetration of mobile phones is further resulting in increased internet penetration.
4. Automation and digitisation of businesses is increasingly becoming a norm.
5. With improved payment gateways and logistics infrastructure in place, e-commerce is gaining momentum, and dissemination of information is taking place via the internet.
6. Emergence of start-ups in the technology space is now prevalent.
7. The availability of skilled labour in the technology industry in India is good owing to an increase in the number of colleges/institutes offering technology courses.
8. The Digital India initiative launched by the Government of India in 2014 provides several government services to the people along with integrating government departments with the citizens of India.

In a bid to cater to the increased domestic and foreign demands, various initiatives have been taken.

Initiatives taken by Indian companies:

1. Indian technology companies are collaborating with foreign companies for IT infrastructure management.
2. Companies are building big data centres in India to support their IT operations.
3. Indian technology companies are making huge investments in the space of disruptive technologies such as wearables and the Internet of Things (IoT).

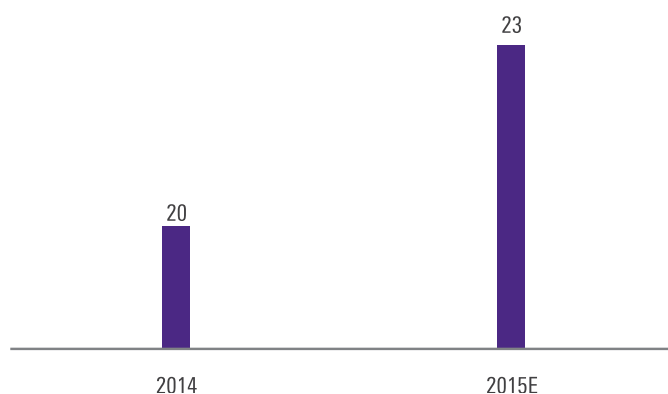
Initiatives taken by the government:

1. A collaboration between India and the U.S. to jointly explore opportunities for Digital India.
2. Launch of the National Web Portal by the Union Human Resource Development Minister for promotion of the National Apprenticeship Scheme for graduates, diploma holders and 10+2 vocational certificate holders, with the being to bridge the gap between students and the industry
3. Construction of a technology incubator in Hyderabad by the Government of Telangana has begun to reposition the city as a technology destination. The aim is to build the world's biggest start-up incubator housing 1,000 start-ups
4. Buoyancy seen in the Indian start-up ecosystem as a result of significant investment, to the tune of USD4.6 billion, received by India as Venture Capital (VC) investments in 2014

3.4 BPM exports

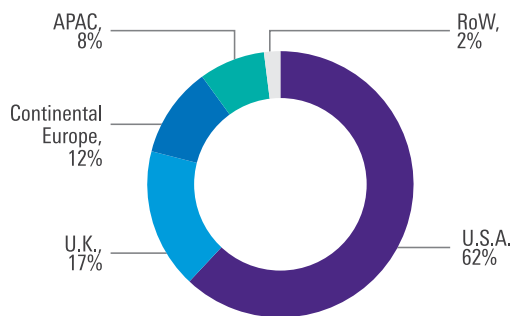
Exports from the BPM sector in India reached USD20 billion in FY2014¹³ and is estimated to grow 11 per cent to reach USD23 billion in 2015¹⁴. The industry has grown dramatically over a period of time with an enhanced focus on SMAC technologies, which provides services like digitisation and automation. The firms providing BPM services have significantly enhanced their scope and added depth to the services by acquiring strong knowledge and expertise across verticals — Customer Interaction Services (CIS) and knowledge services. CIS is one the largest services within BPM followed by F&A, knowledge services, HRO and logistics and procurement. At present, the U.S. remains the top importer of BPM services from India, followed by Europe, with a small segment of services imported by Continental Europe and APAC.

BPM services export revenue (in USD billion)



Source: NASSCOM Strategic Report 2015

BPM services export by geography



Source: NASSCOM Strategic Report 2015

3.5 ER&D exports

Engineering Research and Development (ER&D) has depicted a significant growth curve owing to the mushrooming of Global In-house Centres (GICs) in India. Exports from ER&D reached USD16 billion in FY2014¹⁵, and are projected to grow at the rate of 13 per cent to reach USD18 billion in FY2015¹⁶. India accounts for more than 800 GICs, which forms a major component of exports of ER&D services. India serves as a hub for budding start-ups focussed on ER&D and product development. These start-ups focus on emerging technologies, 3D printing, Internet of Things, wearable devices, etc. North America and Europe are two important geographies for exporting ER&D services, as they generate more than 80 per cent of the total revenue. The automotive sector is one of the most important verticals where key trends such as green technology, customisation and connected cars, are driving the demand for cars. Further, energy and medical devices are among the emerging verticals for the ER&D segment.

3.6 Software exports

Software products in India accounted for USD1.4 billion in FY2014¹⁷, and are projected to grow at a rate of 12 per cent to reach USD1.9 billion in FY2015.¹⁸ SMAC creates a significant impact on software exports with growing opportunities for mobile apps, enterprise products, governance, cloud and cloud-ready products. The U.S. and Europe account for 91 per cent of the total exports followed by Continental Europe and APAC. Indian firms driven by SMAC technologies have a major focus on global expansion.

3.7 Remarkable story of the first Indian IT exporter Background:

The company is a large IT mammoth now and was the first company in India to introduce offshore software development in the late 1980s. The company is also among the top players in exporting IT services along with other Indian IT players. The Chairman of the company, focussed on the U.S. market, as the presence of Indian software exporters there was naught at that time. In 1987, the company joined hands with a leading global management consultancy firm based out of the U.S. This was the first ever Indo-American joint venture, and during 1988–89, after which the Indian company established its first office in the U.S.. At the same time, a well-known sportswear and sports equipment company, was looking for an Indian software firm to manage its distribution management system at that time. This company grabbed the contract and developed a Distribution Management Application (DMAP) as required by sportswear and sports equipment company. They used this DMAP to standardise the application package for similar kinds of operations, further bagging a contract from another company in 1989. With the Indian economy flourishing in the 1990s, many export-based software companies in the country witnessed growth. They started competing with local Indian players, as well as with overseas players for software solutions. In the early 2000s, the company established a software development centre in Toronto as part of its global strategy, and emerged as a software services company with a global footprint.

Factors that contributed to its success:

1. First-mover advantage in the U.S. market in the 1980s.
2. Standardisation of processes
3. Reliance on strategic partnerships for co-creation and co-evolution which entails engagement with clients and partners for the creation of intellectual business solutions and projection of future trends and challenges
4. Building the 'Global Delivery Model' that enabled the company to desegregate offshore and onshore business activities, and leverage its global capacity, resources and strengths

Source: 16, 17, 18 NASSCOM strategic review 2015, NASSCOM

Source accessed on 10 March 2016 www.icmrindia.org

Competition



4. Competition for India in terms of technology exports

The global outsourcing market has expanded exponentially in the past few years. The top exporters of technology services in the world are the U.S., Europe, Japan and China. These countries have built a huge market share by delivering a wide-range of services across the product line, insights across industries, investments in industry-specific offerings and intellectual property tools/templates and accelerators.

There are other countries such as Ireland, Philippines, Malaysia, Vietnam, Israel, South Africa, and Eastern European countries that are emerging as competitors for India in the space of IT services exports. The reasons for the emergence of these countries are

- Offering multilingual talent
- Addition of new data centres
- Time zone alignment
- Strong cultural bonding.

4.1 Leading practices of the competition:

1. Selection of the right logistics partners – one that has international capabilities, can build efficient supply chains and manage tax structures and customs requirements applicable to exports
2. Research analysis is conducted for the evaluation of business opportunities
3. Attainment of product certifications from external entities to achieve product quality standards and rendering value-added services

Focus areas for India to achieve prominence:

- Adapting to the digital environment and spending on the design, build and operation of internet-enabled devices
- Focus on innovating technologies and services revolving around SMAC
- Develop cloud and mobility-based software testing mechanisms
- Develop analytics capabilities and offerings.

4.2 China's information technology industry

China has slowly cemented its position as one of the emerging IT markets worldwide giving tough competition to the existing services markets like India, the U.S. and the U.K. In 2015, China's spending on information and communications technology was projected to cross USD465 billion¹⁹, achieving a growth rate as high as 11 per cent. Expansion of the Chinese technology market is expected to account for 43 per cent of the tech-sector growth worldwide.

China has outpaced the smartphone market. IDC has pegged that around 500 million smartphones will be sold in China, which is three times the number sold in the U.S. and about one-third that of global sales. Many of the smartphones sold in China are expected to be made by their domestic producers including Lenovo, Xiaomi, Huawei, ZTE and Coolpad. It has been predicted that more than 680 million²⁰ people in China will be online next year, approximately equivalent to 2.5 times the number in the U.S.

Source accessed on 3 March 2016: http://www.ups.com/content/aw/en/about/news/press_releases/20140902_LatAmExport.html

¹⁹ <http://bits.blogs.nytimes.com/2014/12/02/in-2015-technology-shifts-accelerate-and-china-rules-idc-predicts/>

²⁰ <http://bits.blogs.nytimes.com/2014/12/02/in-2015-technology-shifts-accelerate-and-china-rules-idc-predicts/>

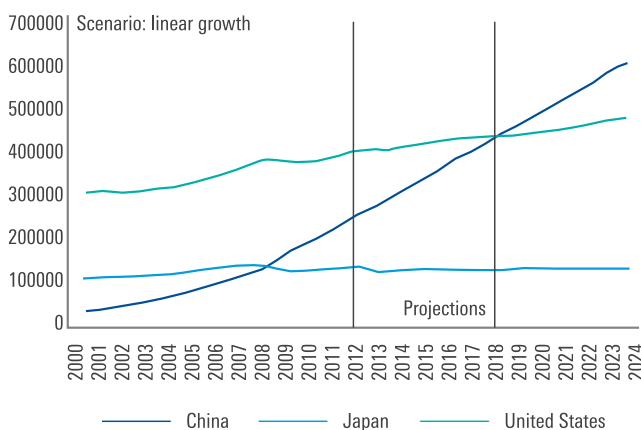
China's R&D expenditure on science and technology

The burgeoning presence of Chinese technology firms and their increasing R&D expenditure in science and technology is proof that China can outpace existing technology nations including the U.S. and the U.K.

According to the Organisation for Economic Co-operation and Development (OECD), China's R&D expenditure increased to a staggering USD256.79 billion in 2012 from USD41.84 billion in 2001, whereas U.S. R&D saw an ordinary growth to USD397.34 billion from USD307.75 billion. OECD has projected that by 2019, China will surpass the U.S. in R&D spending

China poised to outpace the U.S. in science and technology R&D spending by 2019

GERD, million of 2005 USD PPP, 2000-12 and projections to 2024



Source: OECD website, accessed on 8 July, 2015

<http://www.oecd.org/newsroom/china-headed-to-overtake-eu-us-in-science-technology-spending.htm>

4.3 Japan's information technology industry

Japan is an important market and it is the third largest country by way of GDP and second largest in terms of IT spend (over USD125 billion)²¹. Japan is also the third largest electronics manufacturing industry in the world and is home to some of the leading semiconductor buying companies such as Sony and Toshiba. The country is the fourth largest exporter for Semiconductor Manufacturing Equipment (SME).

The electronics products industry in Japan is the largest demand factor driving the sales of semiconductors in the country. In the time period between 2014 and 2016, Japanese electronics production is expected to grow at a moderate growth rate of 4 per cent, from USD93 billion²² to USD97.2 billion. According to the Japan Electronics and Information Technology Industries Association (JEITA), in 2013 Japanese electronics and IT companies manufactured 35 per cent²³ of their products in Japan.

Semiconductor Manufacturing Equipment: Japan is the fourth largest U.S. export market for SME. The U.S. SME sales to Japan reached USD4.2 billion in 2014, and is projected to reach USD4.7 billion in 2016²⁴

4.4 Government incentives given to the IT services sector in the competing countries

- China offers significant tax incentives for R&D. It provides a 150 per cent R&D super deduction which equates to a net saving of 12.5 per cent for eligible expenses²⁵. It also offers a high and advanced technology 'status' to specific companies that meet a strict set of criteria, and if eligible, the corporate tax rate is reduced from 25 per cent to 15 per cent for these eligible companies²⁶.
- The Chinese government also offers an Advanced Technology Service Enterprise (ATSE) status to companies in specific service industries, again with reduced corporation tax benefits, and advantageous tax provisions for the purchase of R&D equipment by qualified R&D companies²⁷.

Sources: 21 2015 ITA Semiconductors and Semiconductor Manufacturing Equipment Top Markets Report

22 2015 ITA Semiconductors and Semiconductor Manufacturing Equipment Top Markets Report

23 2015 ITA Semiconductors and Semiconductor Manufacturing Equipment Top Markets Report

24 2015 ITA Semiconductors and Semiconductor Manufacturing Equipment Top Markets Report

25 <https://home.kpmg.com/xx/en/home/insights/2015/04/making-the-most-of-r-and-d-tax-incentives.html>

26 <https://home.kpmg.com/xx/en/home/insights/2015/04/making-the-most-of-r-and-d-tax-incentives.html>

27 <https://home.kpmg.com/xx/en/home/insights/2015/04/making-the-most-of-r-and-d-tax-incentives.html>

Strengths and Opportunities



5.1 The evolving roadmap to promote ITes- BPM in India

Evolution of strategies and recommendations for the future		
Past	Present	Future
<ol style="list-style-type: none"> 1. Software Technology Parks (STPs): Software companies could set-up their operations in locations that are convenient and inexpensive and accordingly plan their investments and growth plans driven by business needs. 2. Special Economic Zones (SEZ) scheme: Aimed at creating competitive, convenient and integrated zones offering leading infrastructure, utilities and services for global businesses. 	<ol style="list-style-type: none"> 1. Rate of income tax on royalty fees for technical services reduced from 25 per cent to 10 per cent to facilitate technology inflow. 2. IT industry concerns related to the need for a liberal system of raising global capital, incubation facilities at our centres of excellence, funding for seed capital and growth, ease of doing business, etc. are being addressed. 	<ol style="list-style-type: none"> 1. It is becoming significantly important for India to have a distinctive legal regime in place to promote data protection. 2. Served from India Scheme could be restored for IT and ITes to boost sector exports. 3. Eliminating the levy of MAT from SEZ and STP could help make SME products and services cost competitive. 4. Tax holiday for ITes units outside SEZs could be restored. DeitY has formulated a scheme, which should be implemented at the earliest. Over 5,000 SME IT/ITes companies may become competitive, resulting in increased exports and employment generation.

Source accessed on March 7,

2015 Services conclave report, 2014 NASSCOM

5.2 Analysing the strengths and opportunities of the Indian IT-BPM industry

Strengths	Opportunities
<ul style="list-style-type: none"> – Labour arbitrage driven by strengthening of the U.S. Dollar against the Indian Rupee – Supportive state and national government policies – Substantial talent pool of skilled IT professionals – A large number of these skilled professionals are young and English- speaking – Launch of the Start-Up India, Stand-Up India initiative with reforms and incentives for start-up entrepreneurs, ease of registration and winding-up of such businesses and plans to set-up start-up incubators and hubs in multiple academic institutions across states in India – Prevalence of an entrepreneurship culture in India leading to emergence of a new set of service providers 	<ul style="list-style-type: none"> – Focus on collaboration with the Indian Government for the success of initiatives like Digital India, Make in India and development of Smart Cities in India – Focus on emerging technologies such as 3D printing, Internet of Things (IoT) and smart healthcare – Emergence of rural BPMs – Significant number of graduates could be trained to be employable through the increased number of quality training institutes/courses

Skill set required in the IT-BPO industry: With the emergence of new technologies such as SMAC, the IT-BPO sector creates additional demand for domain-specific professionals. Though the sector is likely to continue to have demand for traditional professionals, the new set of domain-specific professionals such as data analysts, social media analysts and cloud trainers are likely to see the highest growth in the future workforce requirement.

Technology

- Need for diverse and vertical specialists driving greater lateral hiring, especially among SMEs and GICs
- Cloud and mobile technology, application development specialists
- Business intelligence and data analysts

Domain specific

- Platform engineers
- Bankers
- Mathematicians
- Cybersecurity coders

Soft skills

- Customer interaction
- English communication skills
- Presentation skills

| 5.3 Upcoming sectors in IT services

The growth in IT services is being driven by an increasing demand for CRM and ERP solutions, user experience technologies, IoT and value added services around SMAC, especially cloud computing. Also, e-commerce and data warehousing, as an offshoot of the growing momentum of SMAC, are increasingly gaining importance.

The Internet of Things is driving the convergence of connecting data, people, things and processes. It is responsible for bringing about a major transformation to create a highly personalised experience by merging the physical world with the virtual one. NASSCOM predicts that by 2025 the economic impact of IoT would be USD2.7–6.2 trillion per year. The potential number of connected devices in India by 2025 is expected to be 2–10 billion. Hence, the IoT opportunities are predictive maintenance, asset utilisation, disaster planning and recovery and inventory tracking. In addition to the big technology players offering services in the domain of IoT, NASSCOM determines the number of Indian start-ups in this space to be 35–40. Many companies are investing in this space to gain a competitive advantage by providing innovative solutions to consumers.

India is increasingly becoming the go-to location for developing cloud platforms and products. According to NASSCOM, there has been a three times rise in cloud-related deal signings in the last three years. There has been an increase in the adoption of SaaS and public and private cloud models. In cloud computing, opportunities could be leveraged in cloud consulting, broker integrator and cloud system, virtualised infrastructure and application management and customising SaaS packages. Apart from the big players that are offering services in cloud computing, India has about 800 start-ups in this space.

The e-commerce market in India has shown exceptional growth in the last five of years, adding USD10 billion, according to NASSCOM, completely transforming the way of life. There is tremendous growth, projected for India in 2016. This is primarily being driven by the mobile app industry, given that India's mobile penetration is expected to be greater than 75 per cent. Other factors driving the market are growing internet affordability, smartphone adoption and innovative payment options.

The popular categories may be tours and hotels reservations, airline tickets reservations, apparel and non-consumable durables and entertainment-related products. The Indian e-commerce market is booming, as customers can access a secure online transaction environment, for example — Cash On Delivery (COD) proposition, excellent logistical support including reverse logistics and great delivery timelines with no charges. Customer-centric services are also on the rise owing to excellent connectivity, shorter delivery timelines, zero delivery prices, reverse logistics, etc. In the current scenario, existing players are consolidating to strengthen their position. They are applying advanced analytics to understand consumer shopping behaviour to articulate future strategies. NASSCOM has identified Delhi, Bengaluru and Mumbai as the top-three metro cities, and Ahmedabad, Chandigarh and Jaipur as the top-three non-metro cities, driving the Indian e-commerce industry.

There are two main challenges faced by e-commerce vendors in India. First, the inability to pay online. Cash transactions form the major chunk in the overall pie of annual spending in the country. Although online retailers have found an easy option of Cash on Delivery (COD), it is yet to catch on. Getting products to customers in a matter of a few days is not possible in cases where orders are placed by people residing in rural areas. Thus, a vast population of the Indian customer base still remains underserved.

Data warehousing is also gaining importance especially in the analytics-driven environment, needed to create a central location as well as a permanent storage space for various data sources needed to support a company's reporting, analysis and other business intelligence functions. It could be applied directly to business processes such as sales, market segmentation, financial management and inventory management. The advantages offered by data warehousing include overcoming the challenges based on decision-making on the use of limited data/instinct, users accessing data quickly from multiple sources, potentially saving data in a consistent format, facilitating storage of large amounts of historical data and generating a high return on investment.

In summary, IoT, cloud computing, e-commerce and data warehousing are four upcoming segments that are expected to drive the demand for India's IT service offerings.

5.4 Issues and concerns faced by the technology industry vis-à-vis SEZs

The Minimum Alternate Tax (MAT) of 18.5 per cent is levied on units set-up in SEZs in India. The concerns faced by these units are:

- (a) Impact on access to income tax holiday
- (b) Adverse impact on investor sentiment since MAT exemptions are punishable under the World Trade Organisation's (WTO) rules

Options that could be explored to address these concerns are:

- (a) Removal of MAT in a phased manner to reduce the effective tax rate on organisations
- (b) Lowering the rate of MAT on SEZ operations in a bid to stimulate growth



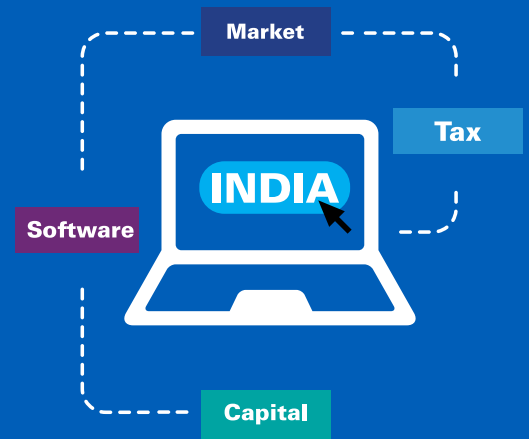
| 5.5 Reforms required

Sr. No.	Action proposed	Stakeholders			Key performance indicator	Outcomes
		Ministry/ Government department	Industry association	Consulting industry		
1	Tax holiday for ITeS units outside SEZs could be restored. DeitY has formulated a scheme which could be implemented at the earliest	Department of Revenue /DeitY	ESC	IT and ITeS	Unlike many other industries, IT services need to be location independent. STPI scheme provided tax holiday outside SEZs	Over 5,000 SME IT/ITeS companies are expected to become competitive, resulting in increased exports and employment
2	Eliminating levy of MAT from SEZ and STP	Department of Revenue	ESC	IT and ITeS	MAT could be perceived as income tax called by another name. It is also contrary to the commitment given by the government to provide SEZ export units a 10-year tax holiday, and is particularly hard on small and mid-sized companies	SME products and services can emerge cost competitive
3	SEIS could be restored for IT and ITeS	DoC	ESC	IT and ITeS		Expected to boost ITeS exports
4	Service tax threshold for ITeS could be INR1 crore	Department of Revenue	ESC	IT and ITeS	There are a number of SME ITeS companies as well as many new entrepreneurs willing to venture into ITeS services	SMEs are expected to get some relaxation and new entrants could be encouraged to enter the IT services sector
5	Exemption on dividend declared by an overseas subsidiary of an Indian company from income tax in India	Department of Revenue /DeitY	ESC	IT and ITeS	Increased tax burden because subsidiary income currently comes under taxable income	This may encourage subsidiaries to declare dividends and remit it to the country

Source accessed on 7 March 2015;

Services export promotion council report, 2014, published in November'2014

Service providers in India



6.1 Future offerings:

- Setting up Software Technology Parks (STPs) in different parts of the country to provide infrastructure facilities in Tier-II and Tier-III cities
- Setting up Special Economic Zones (SEZs) for manufacturing, and capitalising on the 'Make in India' initiative in Tier-II and Tier-III cities
- Parity in taxation between digital transactions with physical transactions to facilitate the former

6.2 Approaching international markets:

Service providers need to:

- Provide digitalised offerings to their customers by enabling technologies such as mobile, cloud, social, analytics and IoT and helping clients undergo digital transformation.
- Capitalise on the consumerisation of IT.
- Articulate value relating to the attainment of KPIs and business outcomes.
- Build an presence to start with, taking on low margin and low value work.

Regulatory architecture



I 7. Regulatory architecture

The technology sector in India is one of the least regulated sectors in the country, where the Department of Electronics and Information Technology (DeitY), The Ministry of Communications and IT play an imperative role.

Below are some of the industry bodies and trade associations which represent India at global platforms:

Accreditation:

- NASSCOM Assessment of Competence (NAC)
- National Skills Registry (NSR)

Standards:

- Capability Maturity Model Integration (CMMI)
- International Organisation for Standardisation (ISO) 27001: 2013
- International Organisation for Standardisation (ISO) 31000: 2009
- IT General Controls
- Cyber Security Disclosure Guidelines: Securities Exchange Commission (SEC)

Industry associations:

- Confederation of Indian Industry (CII)
- National Association of Software and Services Companies (NASSCOM)

- The Associated Chambers of Commerce and Industry of India (ASSOCHAM)
- Federation of Indian Chambers of Commerce and Industry (FICCI)
- Electronic Industries Association of India (ELCINA)
- Electronic and Computer Software Export Promotion Council (ECSEPC)
- Manufacturers' Association for Information Technology (MAIT)

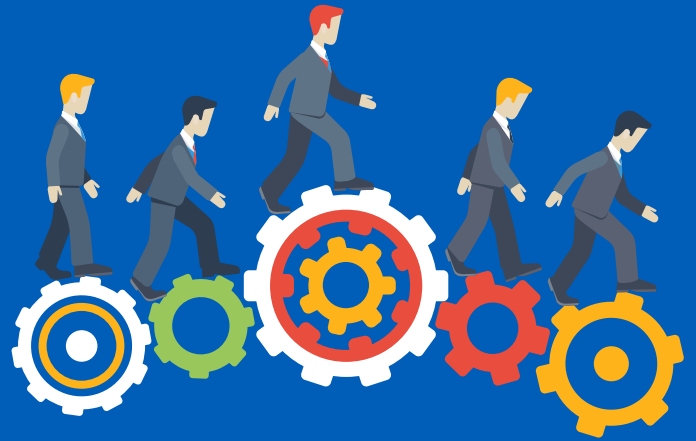
Bodies set-up by the Indian Government in association with NASSCOM

- National Institute for Smart Governance (NISG)
- Data Security Council of India (DSCI)

Acts regulating the technology sector:

- IT Act (2008)
- Companies Act (2013)
- Semiconductor Integrated Circuits Layout Design Act (2000)
- Semiconductor Integrated Circuits Layout Design Rules (2001)
- Right to Information Act (2005)
- National Cyber Security Policy (2013)
- Privacy Law (Draft)

SMEs in services



| 8. SMEs in services

In the past few years, the Small and Medium Enterprise (SME) sector has been playing a pivotal role in the economic growth of the country by employing a significant percentage of the Indian population and contributing to the manufacturing output. Earlier, SMEs were conservative toward investing in IT services. However, given the changing times, with an increase in internet penetration and the influx of new technologies like cloud computing and virtualisation, these companies have realised the need and importance of IT for their growth. Big companies like **Google and Amazon** are helping SMEs expand their presence further. In December 2014, Google launched an application called 'Google My Business', which seeks to help SMEs create an online presence to motivate users to go online. Amazon is promoting SMEs with various e-tailing initiatives. It runs an outreach programme that trains SMEs on promoting their businesses by using tools and techniques that are available on the internet.

Owing to the increase in complexities of operations in businesses, SMEs are focussing on the adoption of innovative and cost-effective technological solutions, across industries. The Make in India initiative launched by the government last year provides scope for the growth of the SME sector. Manufacturing SMEs could leverage the government's focus on manufacturing goods in India instead of importing them from other countries. This is expected to save time and lead to a reduction in costs. Another benefit offered by SMEs in India is the creation of significant employment opportunities, which could increase GDP contributions.

Today, Indian SMEs face a few challenges such as shortage of funds, inadequate infrastructure and competition from global companies. Also, despite the increased focus on adoption of new technology, many SMEs are faced with technological obsolescence. However, the government has realised the potential of this sector, and is taking measures to facilitate the growth and development of such companies. A few government-led initiatives are providing easy finance to SMEs and are opening up more incubators across the country.

With India strengthening its position in the IT-BPM arena, many start-ups today are focussing on disruptive technologies in areas including smart healthcare, smart cities, smart infrastructure, etc. These technologies have the ability to power the next mega trend, as the Indian Government has announced many plans to build infrastructure as part of its Digital India initiative that weaves together a number of ideas and thoughts into a single vision.

Research and development



9. Research and development in technology services

The technology sector is currently one of the primary sectors driving growth in India. With the launch of the Digital India initiative in 2014, the government has emphasised the importance of the IT services sector as a growth-enabler. There has been a strong emergence of start-ups in the last five years with the current number being more than 3,100, according to NASSCOM. The announcement of an investment of INR100 million in start-ups by the Indian Government in the 2015 budget is expected to prove instrumental in the growth of this sector. Researchers and developers in the technology sector are constantly struggling with the need to deliver new technology and the ever-changing strategic environment. There is a dramatic change in the kind of outsourcing services demanded of service providers. This could be attributed to the significant change in trends including social, mobile, analytics, cloud and IoT. Foreign companies like to have services that are not only cost effective but also have a direct relation to their business. For example, Wipro, TCS and HCL Technologies are among the top companies across verticals in the R&D space.

In the current scenario, the major R&D focus areas are:

1. Analytics solutions for customers to help them understand their needs in a thorough manner
2. Digital solutions to help companies expand their customer life cycle by managing their customers and competition better
3. IoT solutions to provide customers with smarter marketing tools and personalisation at multiple touch points across channels
4. Customer-driven design tools formed in collaboration with the customers using agile methodology to provide them with a richer output
5. Natural user interfaces that aim to replace the existing interfaces and make it easier for customers to interact with computing devices using normal human gestures, without the need to touch or type
6. Wearable gadgets are expected to improve workplace productivity and make organisations more efficient
7. Research in the field of cybersecurity in order to prevent intrusion of privacy and safeguarding important data

Skilling



I 10. Skilling

The ITes sector is pegged to grow at an exponential rate in the near future as there is likely to be a growing demand from global corporations for new services such as cloud computing, business intelligence, digital technology and mobile applications. In a bid to tap opportunities in the emerging high-end services segment, the country needs to focus on building a large pool of skilled workers. India's leading IT outsourcing service providers have flourished by offering application development and infrastructure management services to European and U.S. clients. With the increase in competition, companies are looking to move up the value chain and tap into high-margin businesses with skills in areas such as automation, 3D printing and artificial intelligence. For this to happen, niche skills and domain expertise is extremely important. Hence, re-skilling is gaining a lot of traction. There is a need to mitigate the mismatch of skill sets by conducting a mapping exercise to identify the requisite skills, and developing capacities in India as per the shortage in flourishing economies with a high demand. This holds true especially for the new areas such as SMAC, IoT, etc. emerging in the technology sector.

There have been huge efforts made to upgrade the country's workforce in the domain of digital skills. According to NASSCOM, there are more than 1,50,000 employees with SMAC skills. approximately 50,000 employees are skilled in analytics, 30,000 people in enterprise mobility and more than 50,000 in cloud and social media and collaboration.

The government is making efforts in this direction. It launched the Skill India initiative to train the citizens of the country in various skills, with a major focus on technology. The Union Human Resource Development Minister, Smriti Irani has launched the National Web Portal for promotion of the National Apprenticeship Scheme for graduates, diploma holders, 10+2 pass-outs and vocational certificate holders, with a view to bridge the gap between the students and the industry.

Healthcare sector



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Healthcare overview



The global healthcare sector is expected to have a positive, yet challenging year in 2016. Historic business models and operating processes may no longer deliver the expected services to the rising demands of patients. The consumption of healthcare services is evolving globally, giving rise to various trends, such as medical value travel and e-health. There has been a shift towards patients travelling for health services from developed to developing nations owing to the low costs, easy information availability on the internet and relatively smaller waiting periods. Many countries are also providing healthcare services through the telemedicine mode to countries in need of the same. Emerging markets, such as India, Thailand and Malaysia, are driving the supply side of cross-border healthcare services.¹

Key evolutionary changes in the global healthcare services sector



Source: KPMG in India's analysis, 2016

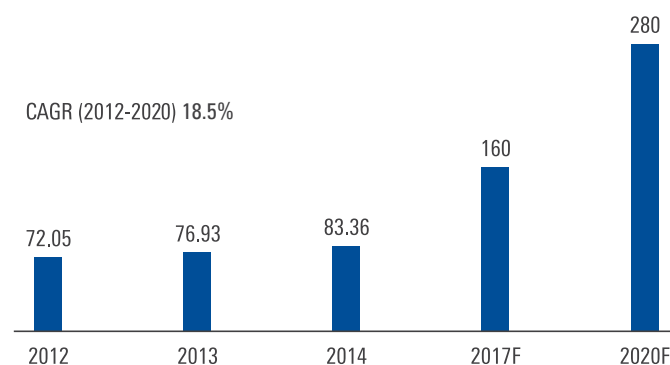
The Indian healthcare sector established its roots in 1990s as a small not-for-profit social sector backed by the government. With the evolving environment and the needs of the population, healthcare evolved into a significantly competitive and performance-driven sector with private players forming a dominant segment in

healthcare delivery. Today, the private sector is widely regarded as the healthcare industry's vibrant force that is continuously helping to establish both a national and international niche.

The healthcare sector in India comprises of three major sub-sectors – healthcare delivery hospitals, clinics and other emerging models; medical devices (medical equipment and consumables), and, medical insurance.² It is forecast to reach **USD160 billion** in 2017, accounting for about 4.2 per cent of GDP and is poised to grow to **USD280 billion** by 2020.³ The sector, owing to its attractive value propositions, has been successful in offering growth opportunities to entrepreneurs. Consequently, private ventures and equity capital have infused a billion dollars of investment in the sector till date.¹

Recent years have been marked by notable activities across various segments of the healthcare ecosystem. The sector is witnessing the emergence of new healthcare delivery models, use of innovative technologies for access and patient connect, transformation of financing mechanisms, and a gradual transformation of the core patient–physician equation – shifting from an archaic to innovative approach.

Indian healthcare sector – Size and growth (USD billion)



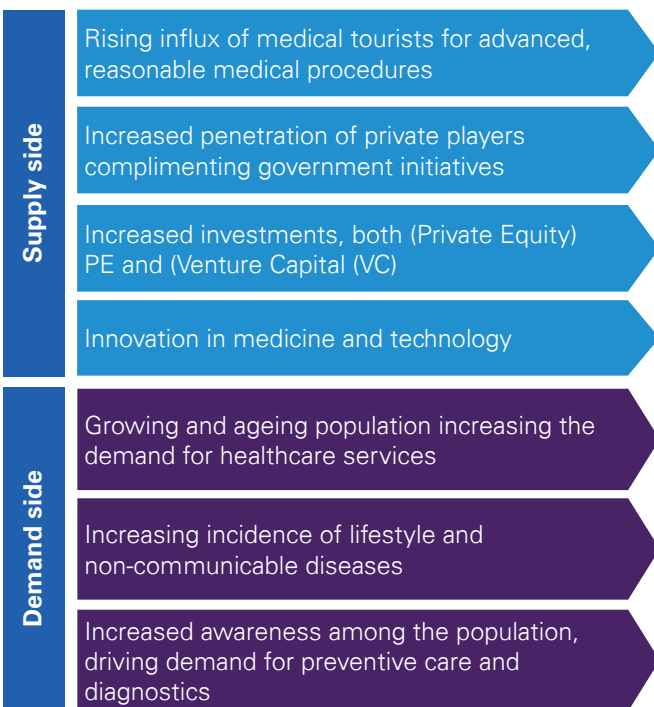
Source: "Healthcare: The neglected GDP driver-Need for a paradigm shift", KPMG in India, August 2015; F stands for forecasted

Source: 1 "Medical Tourism: Treatments, Markets and Health System Implications: A scoping review", Neil Lunt, Richard Smith, Mark Exworthy, Stephen T. Green, Daniel Horsfall and Russell Mannion, Directorate for Employment, Labour and Social Affairs, Page 9, accessed 03/29/16;

2 KPMG in India's analysis;

3 "Healthcare: The neglected GDP driver-Need for a paradigm shift", KPMG in India, 09/02/15

Drivers propelling the Indian healthcare sector

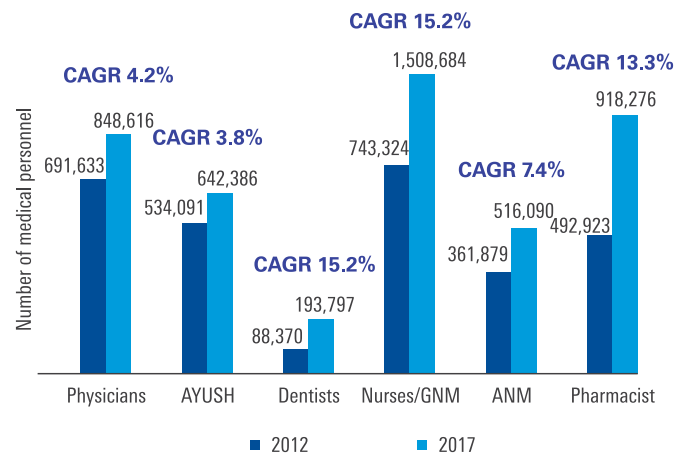


Source: KPMG in India's analysis, 2016

India is emerging as a destination for quality healthcare services at an affordable price.⁴ It offers an attractive value proposition with multispecialty private healthcare services being provided to medical tourists at fraction of the costs in comparison to other developed countries, such as the U.S. The presence of highly qualified doctors, nurses and other healthcare staff strengthens India's position to provide healthcare services to the world. India has developed a strong presence in advanced healthcare e.g., organ transplants and cardiovascular procedures with a high success rate.⁴ Moreover, lower waiting times in hospitals for admission and treatment, makes India an attractive medical value travel destination.⁴

The increasing focus of the government in the form of 'Make in India', 'Digital India', National Rural Health Mission and other such initiatives is reflective by its intent to boost the sector capabilities and develop the manufacturing prowess of the nation, to be able to serve a larger section of the global population. Healthcare is considered to be one of the major sectors that stimulates economic growth and contributes significantly to the country's employment. Hence, given its inherent strengths, the sector has the potential to drive economic growth in the coming decades.

Healthcare personnel employed in India



Source: "Twelfth five year plan (2012-2017), Social sectors," 2013, Planning commission, GOI, Page 36, accessed 122415; KPMG in India's analysis; GNM (General Nursing & Midwifery); ANM (Auxiliary Nurse Midwifery)

Employment in the healthcare sector in India:

Healthcare is the fifth largest employer among all the sectors in India.⁵ India's medical education sector is one of the largest in the world, with Indian doctors being recognised worldwide for their excellent skill sets and the delivery of quality service. The alternate medicine practice is also strong in India with about 6.8 lakh registered AYUSH practitioners in India in 2013.⁶

The government is taking various steps to offer skill development programmes in the healthcare sector. Further, hospitals are collaborating with various universities and colleges to jointly offer specialised training courses to improve skills.

Source: 4 KPMG in India's analysis, 2016;

5 "Medical Value Travel – FICCI Heal Conference," 090214, KPMG in India;

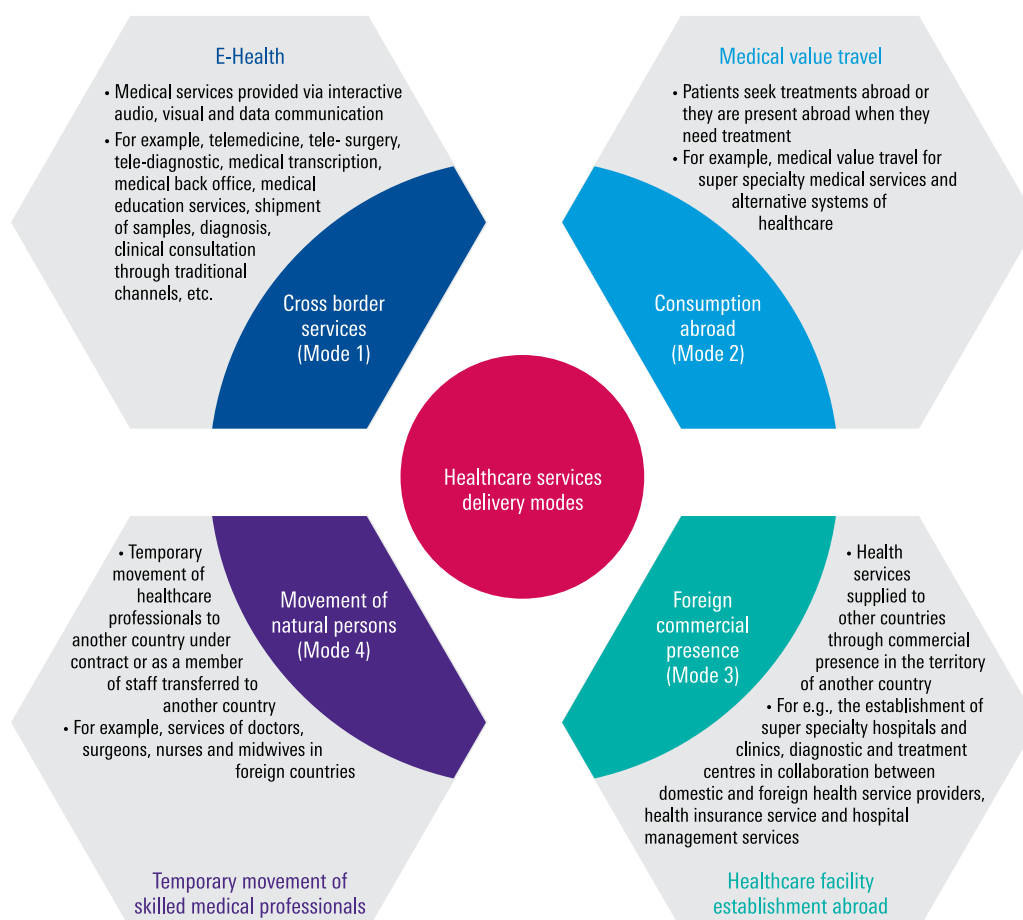
6 "Twelfth five year plan (2012-2017), Social sectors," 2013, Planning commission, GOI, Page 2, accessed 122415.

India's profile in the sector – Mode-wise potential⁷



In the recent past, health services have seen rapid globalisation as reflected in the growing number of patients travelling across international borders for their treatment, physical movement of healthcare personnel, rapid growth in information technology platforms serving healthcare around the globe and in the increasing number of joint venture engagements. The General Agreement on Trade in Services (GATS) 1995 defines the modes of trade in services: Mode 1 – cross-border supply; Mode 2 – consumption abroad; Mode 3 – commercial presence; and Mode 4 – movement of natural persons

Healthcare services delivery modes



Source: "Healthcare Services," Services Export Promotion Council, <http://www.servicesspc.org/healthcare-services/>, accessed 022315

India has been historically making its presence felt in the global market through the export of quality services. While IT has been a forerunner in this, with time, the country has also been successful in becoming a formidable force in the trade of health services.

India has been exporting health services in the form of providing medical treatment to overseas patients and physical movement of skilled health professionals to other countries. However, with the growing impact of technological revolution, improvements in infrastructural and quality benchmarks, cost arbitrage and an enhanced skill set of the medical staff, the country has been able to establish itself as an important and favourable medical value travel destination and a medical process outsourcing centre. Many Indian healthcare players have also been able to establish their niche globally, with the setting up of super specialty hospitals and clinics, and diagnostic and treatment centres in a collaboration mode.

Four key modes that are essential for enabling and nurturing India's export of healthcare services have been identified and their potential has been assessed below.

Mode 1: Telemedicine and medical process outsourcing services

Digital innovations and technology are revolutionising the entire healthcare sector globally. From a well-connected network of doctors, patients and clinics using

smartphones, to customers monitoring their own health using innovative wearable technology – the scope for digitisation is here to stay, innovatively, in the healthcare industry. With the launch of the 'Digital India' initiative, the government is stepping towards digital empowerment. India is expected to be a leader in IT use in healthcare (e-health) by 2019.⁸

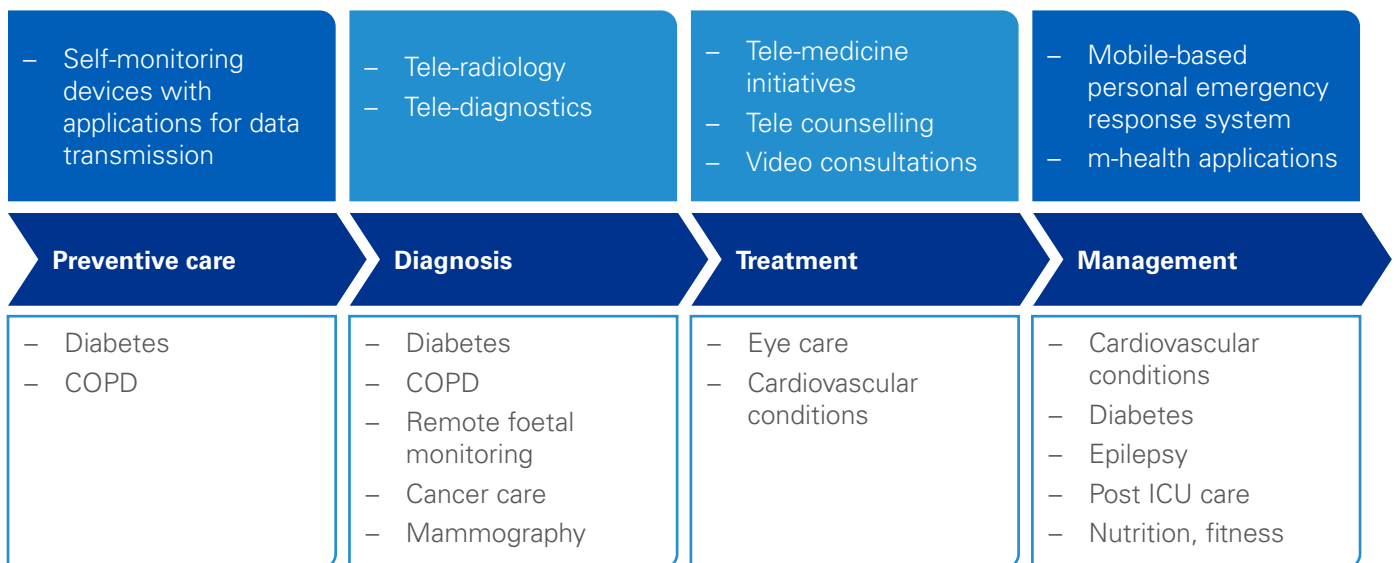
The role of technology and telecommunication is being explored in every aspect of the healthcare delivery value chain and within multiple categories of healthcare, globally. Be it related to prevention, diagnosis, treatment or management of an ailment (chronic or acute), Information Communication Technology (ICT)-based models may find relevance in several cases. Economic globalisation has further facilitated the electronic delivery of cross-border services. Digitisation and technology could pave the way for easy access to information among healthcare providers, and better interventions to improve service quality. Further, it is expected to enhance the reach of healthcare facilities to remote locations. If the elements of Digital India and healthcare work in sync, new technologies have the power to strengthen all the four pillars of healthcare – accessibility, affordability, availability and acceptability.

Key:

Future potential

Current strength

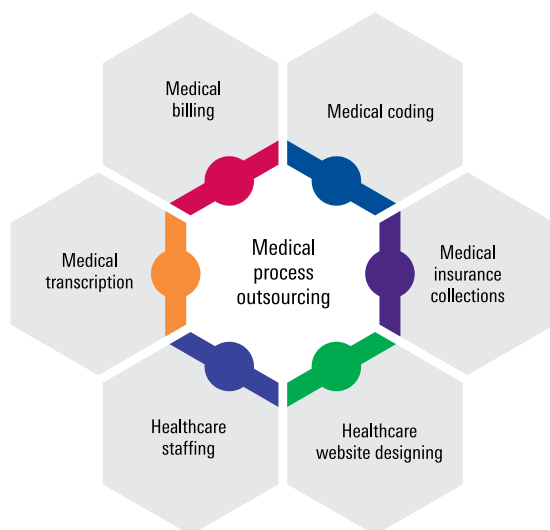
Remote health models and relative presence in India



Source: KPMG in India's analysis, 2015

The global healthcare market recognises India as amongst the leading hubs in Asian countries for offshoring transcription services owing to its infrastructure, availability of skilled manpower and a favourable economic environment.⁹

Medical process outsourcing services



Source: KPMG in India analysis

- India is in a leading position to offer services, such as telemedicine, tele-surgery, tele-diagnostic services and medical process outsourcing services
- The government has been actively investing in telemedicine
- The government's 11th Five Year Plan allocated USD50 million for telemedicine

Source: KPMG in India's analysis, 2016; *Analysing the Telemedicine Market in India*, Smart Research Insights, accessed via ISI Emerging Markets Database, 072015; "Telehealth Report – 2011 with proceedings of International Telemedicine Congress 2011," *Telemedicon'11*, Page 50, accessed 022416

Indian Government telemedicine initiatives:

Telemedicine initiatives in India are largely under the ambit of the public sector. Many telemedicine activities are in project mode, supported by Indian Space Research Organisation (ISRO) and the Department of Information Technology, and are being implemented through the state governments. The government's 11th Five Year Plan allocated USD50 million for telemedicine with a greater part of the funding to be channelised through PPP.¹⁰ It has also announced the linkage of all district hospitals to leading tertiary care centres through telemedicine and audio visual media in the 12th Five Year Plan period. The transmission of data is expected to be enhanced by the use of m-health.¹¹ Indian telemedicine, though in its nascent stage, is showing robust growth at approximately 20 per cent and is projected to grow from USD8 million in 2012 to approximately USD19 million by 2017.¹²

The government has been actively investing in telemedicine in the country to not only successfully address the accessibility issues of the rural community, but also export its services to African nations where the demand for such services is high.¹³

The Government of India has undertaken a major step by commissioning the National Fibre Optic Network with an investment of USD3.7 billion. The network is expected connect 250,000 gram panchayats in the country. This network could give a thrust to telemedicine usage in remote areas for consultation and diagnosis in a cost effective manner.¹⁴

In a nutshell, the Indian telemedicine model is in a favourable position to address the healthcare needs of the global population that has limited access to healthcare. It could link isolated communities to advanced medical services and provide the speedy delivery of medical expertise.

Sources: KPMG in India analysis, 2016;

9 "Medical Transcription Services Market is Expected to Reach US\$ 60.6 Billion Globally in 2019," PRNewswire, <http://www.prnewswire.com/news-releases/medical-transcription-services-market-is-expected-to-reach-usd-606-million-globally-in-2019-transparency-market-research-233270971.html>, 112513; "India: Telemedicine In India-Legal Analysis," Mondaq, <http://www.mondaq.com/india/x/221258/food+drugs+law/Telemedicine+In+IndiaLegal+Analysis>, 021213; "Barriers to Movement of Healthcare Professionals-A case study of India," CUTS Centre for International Trade, Economics & Environment, accessed 031515;

10 "Telemedicine set to grow in India over the next 5 years," *The Lancet*, [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(08\)60052-5/fulltext?version=printerFriendly](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(08)60052-5/fulltext?version=printerFriendly), accessed 031515;

11 "Telemedicine set to boost health services," *Times of India*, <http://timesofindia.indiatimes.com/India/Telemedicine-set-to-boost-health-services/articleshow/12310829.cms>, 051812;

12 "Analysing the Telemedicine Market in India, Smart Research Insights," accessed via ISI Emerging Markets Database, 072015;

13 – KPMG in India's analysis;

14 "Creating viable business models for inclusive growth through the National Optical Fiber Network," 2013, KPMG;

Case in point: Kerala's dedicated efforts toward reducing MMR, IMR through technology

Background



- The state government, amongst other states, has launched the Name Based Information Tracking System (NBITS) of Pregnant Mother and Child Immunisation as per the directions from the Ministry of Health and Family Welfare (MOHFW), Government of India.
- This is aimed at monitoring ante natal care checks ups of pregnant women, institutionalising deliveries and post natal care for reducing maternal mortality, and tracking of children for regular immunisation and preventing drop out cases thereby ensuring 100 per cent immunisation.¹⁵
- As a part of the hospital kiosk programme of Kerala, parents of newborn children in the state are expected to receive SMS reminders on their registered mobile numbers about information with respect to mandatory vaccinations for the infant, including the exact date and period of the vaccinations and their significance.¹⁶

Outcome



- The decline in its Maternal Mortality Rate (MMR) as per the Sample Registration System (SRS) of 2007–09 (MMR 81 per 100,000 live births) and 2010–12 (MMR 66 per 100,000 live births) is at an impressive 19 per cent approximately.¹⁷
- This reduction in MMR could be partially attributed to the effective and timely implementation of the scheme.
- Kerala is one of the best performing states in the country with an Infant Mortality Rate (IMR) of 12 per 1,000 live births. However, the state has a long way to go in improving its neonatal mortality rate, as 75 per cent of infant deaths in the state reportedly occur during the neonatal phase.¹⁸

Future potential: Mode 1

Geographic expansion

- Telemedicine offers significant potential in supplying healthcare services and attracting medical tourists from African nations, SAARC and CIS countries, and regions which have less developed infrastructures and lesser availability of medical workforce.
- A few initiatives, such as the SAARC telemedicine network and the pan-African e-network project, could push the demand for Indian services significantly.



Service offering expansion

- India has enormous future potential in remote health models, such as mobile-based personal emergency response system, m-health applications and self-monitoring devices with applications for data transmission.
- An expansion in e-diagnostics and e-radiology, with sample collection centres and radio-diagnostic centres abroad is expected



Source: KPMG in India Analysis, 2016

Source: adopted from "Healthcare: The neglected GDP driver, Need for a paradigm shift," 090215, KPMG in India, Page 33, accessed 122415,

15 MCTS-Mother and Child Tracking System, Arogya Keralam government website, <http://www.arogyakeralam.gov.in/index.php/special-initiatives/mcts>, accessed 062115;

16 Kerala to launch SMS alerts for vaccinations of infants, Deccan Herald, <http://www.deccanherald.com/content/140333/kerala-launch-sms-alerts-vaccinations.html>, 022311, accessed 062115;

17 Decline in Rates of Maternal and Infant Mortality, Press Information Bureau Government of India, Ministry of Health and Family Welfare, <http://pib.nic.in/newsite/PrintRelease.aspx?relid=103446>, 021114, accessed 062115;

18 State to pilot norms to reduce IMR, The Hindu, <http://www.thehindu.com/news/national/kerala/state-to-pilot-norms-to-reduce-imr/article5509245.ece>, 122813, accessed 062115

I Mode 2: Medical value travel

Medical value travel, also popularly known as medical tourism, is being considered as India's next crown jewel. The country has been successfully attracting patients from around the globe to provide them with quality, low-cost healthcare treatment in India. Medical value travel is fast emerging as India's distinct proposition, adding considerable value to the economy.

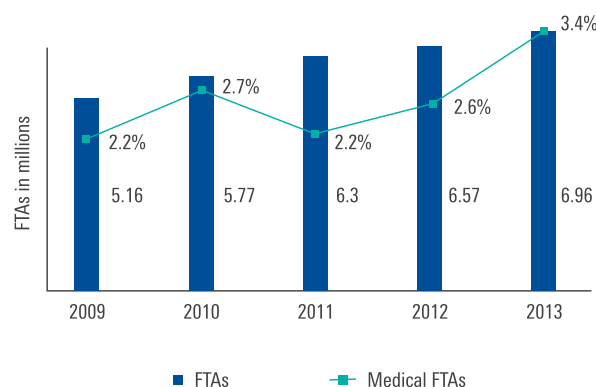
The medical value travel market in India has been estimated to grow at a CAGR of 30 per cent to reach USD10.6 billion in 2019, from USD2.8 billion in 2014.¹⁹ People from different parts of the world are travelling to India to capitalise on the comparative cost advantage and quality services offered by Indian medical facilities. Additionally, the rising costs of healthcare in the developed world, along with rising disposable incomes and healthcare awareness among the global population, is forcing the patients to explore cheaper options in countries like India. Consequently, it is propelling the growth of medical value travel in the country. India hosted about 230,000 patients from all over the world in 2013, with a majority of patients coming from developing and under-developed economies.²⁰

- **India's medical travel market grew to USD2.8 billion in 2014¹⁹**
- **India's cost arbitrage gives it an edge over other countries**
- **India prices 30-70 per cent lower than other healthcare destinations¹⁹**

One of the initiatives from the central government is the '**Pan-African e-Network**' that is seeking to bridge the digital divide across the African continent and is bringing telemedicine and tele-education to the African people by linking them to premier educational institutions and super-specialty hospitals in India. The first phase of the project came into life on 26 February 2009, followed by the second phase on 16 August 2010. In addition, to the cost-effective benefits of the project, the telemedicine sessions have been beneficial while providing timely healthcare specialist advice. Till date, approximately 700

Continued Medical Education (CME) lectures have been delivered by doctors from leading Indian super-specialty hospitals. India has also offered training at the regional level by conducting workshops in the telemedicine and tele-education modules.²²

Total Foreign Tourist Arrivals (FTA) vs FTAs for medical treatment in India



Source: 'India Tourism Statistics (2013), Ministry of Tourism, 2014, Page 50, accessed 122415, KPMG in India analysis 2016



With the launch of the '**Healthcare Tourism portal**', the Indian Government has further eased the procedures for treatment seekers/medical tourists from around the globe, via a one-point information site, which encases hospital-related (location, specialty, procedures, language, etc.) and travel-related information (stay-costs, benefits, visa formalities, etc.) on India.²¹

The portal hence benefits medical tourists to be better planned and informed in advance, to choose cost-effective quality care at their preferred destination.

Following the success of cooperation between Indian and African countries on telemedicine, the government has offered an additional grant of USD600 million. The 30 per cent annual growth rate in medical tourism is credited to the cost and quality advantage that India provides to the masses who might be sitting miles away from India.²³

Source: 19 "Healthcare-the neglected GDP driver," KPMG in India, September 2015;

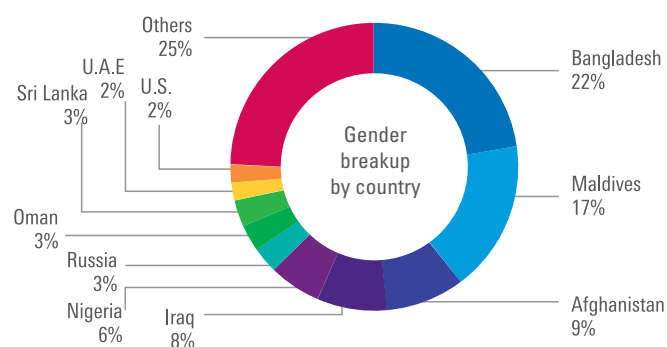
20 'India Tourism Statistics (2013), Ministry of Tourism, 2014, p50, accessed 122415;

21 "India's Healthcare Tourism portal Inaugurated by PM Narendra Modi at GES," D24 News, <http://d24.in/indias-healthcare-tourism-portal-inaugurated-by-pm-narendra-modi-at-ges/>, 042415, accessed 122115;

22 "Building South-South Digital Bridge: Pan-African e-Network," India Writes, <http://www.indiawrites.org/india-and-the-world/building-south-south-digital-bridge-pan-african-e-network/>, accessed 122115;

23 "India-Africa synergies in health sector mooted," Economic Times, http://articles.economictimes.indiatimes.com/2015-12-03/news/68742028_1_apollo-hospitals-health-sector-medical-tourism, 120315, accessed 122115

Nationality-wise break-up of FTAs for medical treatment



Source: "Medical Value Travel in India," KPMG in India, 090214

As depicted in the pie-chart, neighbouring countries accounted for the highest number of medical tourists' inflows in 2013.²⁴ This could be attributed to the lack of quality healthcare infrastructure and skilled manpower deficit in their countries. Additionally, the physical proximity and similarity in Nationality-wise break-up of FTAs for medical treatment purpose in India, 2012 culture, food and language makes India a convenient option. For similar reasons, the SAARC countries have formed a dominant piece in the medical tourists' pie of

India. Regional cooperation treaties between India and other countries to promote each other as their preferred medical tourist destinations are also strengthening India's position as a sought after destination for medical value travel.

India's cost arbitrage gives it a definite edge over other countries, such as Singapore and Malaysia, to attract medical tourists. Medical treatment offered to tourists enable them to save about 30 to 70 per cent of their costs in India.²⁵

Along with cutting-edge medical technology and cost benefits, India offers the traditional richness of ancient and medieval healthcare treatment methods for wellness and rejuvenation developed from Ayurveda, Yoga, Unani, Siddha and Homeopathy (AYUSH) styles of medicines and practices. Increasing emphasis on physical and mental health has propelled India's wellness market to grow at a 20 per cent rate annually to reach USD8.2 billion in 2014, wherein wellness services comprised 40 per cent of the market.²⁶ India is witnessing a surge in wellness tourism and is expected to be the top-ranked nation globally in this segment to achieve USD14.6 billion²⁷ through 2017.²⁸

Increasing healthcare awareness has changed the mindset of many travelers, from a curative to a holistic healthcare perspective. This has led to wellness tourism, wherein travellers opt for various forms of wellness and rejuvenation services during their travel.

India's cost competitiveness in major surgeries

Procedure cost (USD)	U.S.	Thailand	Singapore	Malaysia	South Korea	India
Heart bypass	130,000	11,000	18,500	9,000	31,700	7,000
Heart valve replacement	160,000	10,000	12,500	9,000	42,000	9,500
Hip replacement	43,000	12,000	12,000	10,000	10,600	7,020
Knee replacement	40,000	10,000	13,000	8,000	11,800	9,200

Source: "Indian Healthcare Services," J.P. Morgan, 12 March 14; MSE Monograph 26/ 2013, Medical Tourism in India: Progress, Opportunities and Challenges; "Global Health and Travel," July-Aug. 13 cited from "Medical Value Travel in India," KPMG, September 2014

Sources: KPMG in India's analysis, 2016;

²⁴ India Tourism Statistics 2013, Ministry of Tourism, 2014, Page 50, accessed July 2015;

²⁵ Healthcare-the neglected GDP driver," 090215, KPMG in India; "Global Medical Tourism Market, Technovia insights, accessed via ISI Emerging Markets Database July 2015;

²⁶ "Make In India: Wellness," Department of Industrial Policy & Promotion page 6, accessed 122415;

²⁷ "Wellness," FICCI report, Page 4, accessed 122415;

²⁸ "India to be number 1 for growth in wellness tourism by 2019: Study," Economic Times, http://articles.economictimes.indiatimes.com/2014-06-13/news/50564535_1_indian-business-tourism-spending-tourism-industry, 061314

I AYUSH

With many years of expertise in yoga and a yurveda, India offers a diverse basket of medical facilities at an effective cost. The demand for AYUSH and herbal products is surging due to their beneficial, preventive and curative approaches for the treatment of chronic lifestyle disorders. India is the second largest exporter of AYUSH and herbal products. Yoga, a drugless system is also widely recognised, leading to an exponentially growing global interest in yoga. The United Nations on the appeal of the Indian Government, had proclaimed 21 June as the 'International Day of Yoga'.²⁹ Soon after its successful celebration and recognition of the amassed acceptance of Yoga, the AYUSH ministry launched the 'Scheme for Voluntary Certification of Yoga Professionals' to be certified by the Quality Council of India, an autonomous body that provides accreditation standards for various sectors, so as to keep a check on the booming business.³⁰

The AYUSH and herbal products' sector is dominated by micro, small and medium enterprises (more than 80 per cent of the enterprises), yielding an annual turnover of about USD2 billion.³¹ In 2013–14, AYUSH exports accounted to USD0.5 billion, out of which raw medicinal herbs accounted for 40 per cent, medicaments for 32 per cent and medicinal extracts 6 per cent.³¹

The escalating costs of conventional healthcare, epidemiological transition to non-communicable diseases and the chemical-based drugs' side effects have led to a surge in demand for AYUSH. Along with the 'Central Sector Scheme for promotions of International Cooperation in AYUSH' by the Department of AYUSH, the Ministry of Tourism also promotes AYUSH systems of medicine in overseas markets. Some of the biggest markets for Indian herbal products are Western Europe, Russia, the U.S., Kazakhstan, the U.A.E., Nepal, Ukraine, Japan, the Philippines, Kenya and Mauritania.^{31,32}

On lines of strengthening AYUSH, the Ministry had established a Traditional Knowledge Digital Library (TKDL) in collaboration with the Council for Scientific and Industrial Research (CSIR). This was done for the prevention of grant of patents on non-original inventions by the International Patent Offices, such as European Patent office, United States Patent and Trademark office, and Japan Patent office, on Indian Systems of Medicine — Ayurveda, Unani and Siddha. As of now, TKDL has been successful in preventing the grant of wrong patents in 220 cases to date.⁵ Besides the 2.93 lakh medicinal formulations of AYUSH, the ministry is also working to include yoga techniques from ancient texts in the public domain, in five international languages, namely English, Japanese, French, German and Spanish.³³

Sources: 29 "International Day of Yoga," United Nations, <http://www.un.org/en/events/yogaday/>, accessed 032916;

30- "A new government-sponsored scheme aims to certify yoga teachers across the world," Times of India, <http://timesofindia.indiatimes.com/city/mumbai/A-new-government-sponsored-scheme-aims-to-certify-yoga-teachers-across-the-world/articleshow/47777903.cms>, 062315;

31 "Wellness Sector: The wellness message to the world," OIFC, <http://www.oifc.in/wellness-sector-wellness-message-world>, 2014, accessed 032916;

32 "Make in India: Wellness," Department of Industrial Policy and Promotion, Page 6, accessed 121815;

33 "Grant of wrong patents prevented by TDKL in 220 cases till date," Business Standard, http://www.business-standard.com/article/government-press-release/grant-of-wrong-patents-prevented-by-tdkl-in-220-cases-till-115120401168_1.html, 120415



Future potential: Mode 2**Geographic expansion**

- On one hand, medical value travel offers significant opportunities for India to provide healthcare services to SAARC regions, Africa, Gulf countries and Southeast Asian countries due to less developed healthcare infrastructure and low availability of specialists.
- On the other hand, India could provide services to medical tourists from developed nations to provide economical treatment for uninsured or underinsured patients.
- SAARC countries, including Afghanistan, Pakistan, Nepal, Bhutan, Bangladesh, Maldives and Sri Lanka, are major sources of medical tourists in India owing to their physical proximity and political co-operation agreements.³⁴

**Service offering expansion**

- India's traditional strength in yoga and ayurveda adds a distinct angle to the country's medical value travel proposition.
- The presence of hospitals at par with international standards and significantly skilled medical professionals have helped India in strengthening its position in medical travel.



Source: KPMG in India Analysis

Sources: 34 "Medical Value Travel in India," KPMG in India, 090214

Mode 3: Establishment of hospitals in foreign countries

India's healthcare players have developed their capabilities to establish and operate hospitals and clinics abroad. The establishment of satellite healthcare facilities by major hospital chains, especially in high potential medical value travel countries, could help India gain a leading position in the medical value travel sector. However, the presence of Indian hospitals abroad is limited and steps are required to facilitate the export of services through this mode.

Indian healthcare chains have developed quality standards and received accreditations from international bodies, such as the Joint Commission International (JCI). Moreover, many Indian doctors are well-recognised worldwide due to their skill sets.

A few hospital chains are focussing on the Africa and Asia Pacific regions, as healthcare platforms required in these countries resonate with the healthcare requirement of India at present. India could focus on developing countries as they have lesser legal constraints as compared to developed countries. Establishment of hospitals in Africa is core to India's relationship building efforts with the African nations.

Future potential: Mode 3

Geographic expansion

- Many African countries are interested in collaborating with both private and government healthcare organisations to build their healthcare capacity.
- Southeast Asia could also be explored to establish healthcare facilities especially in countries which allow a major foreign ownership stake in their healthcare sector.
- Expansion in the SAARC region to strengthen healthcare delivery could further be explored.
- Indian players could explore the opportunities to establish presence in the Middle East.
- India could join forces with CIS countries to establish hospitals and clinics as many countries are prioritising modernisation and the development of healthcare infrastructure.



Service offering expansion

- India could also establish dialysis, radiology and pathology centres abroad.
- India could leverage its telemedicine strength to provide services in the areas mentioned above.



Mode 4: Movement of medical professionals

Services of Indian doctors and nurses are widely recognised abroad owing to their adept skill sets, strong educational background and dedication towards work. India could enter into a partnership with identified foreign

health institutions to channelise cross-country training initiatives where it could export health services through the movement of personnel on a temporary basis as well as get international recognition for paramedical courses that could make the movement to abroad easier for nurses, physiotherapists, care givers and paramedical personnel.

Future potential: Mode 4

Geographic expansion

- India could focus on SAARC countries as well as those located in Africa, Southeast Asia and the Gulf region. However, India is currently facing a shortage of doctors. Hence, the export of services under this mode could be promoted judiciously



Service offering expansion

- India could focus on its strength in AYUSH and yoga to send professionals abroad. Additionally, Indian dentists have opened the window of opportunity that is expected to propel dental tourism to constitute 30 per cent of the total medical tourism industry.³⁵
- India could also create centres in collaboration with other countries to promote alternative medicine offerings



Source: 35 "Healthcare and Dental Industry in India," Indian Dental Association, accessed December 2015

I Regulatory architecture/regime: Indian healthcare

The Ministry of Health and Family Welfare is charged with developing and implementing the health policy in India. The Centre has set-up regulatory bodies for monitoring the standards of medical education, promoting training and research activities.



The **Medical Council of India (MCI)** is the statutory body in India engaged in the establishment and standardisation of **medical education** in India. It also provides recognition of the medical qualifications in the country. The body helps ensure quality standards in the practice of medicine by registering doctors to practice in the country.³⁶ Most of the medical staff in India is registered with the MCI, reflective of the high level of skills and knowledge the country has to offer in the sector. Various acts, such as the Indian Medical Council Act, 1956 and the **Indian Medical Council (amendment) Act, 2010, 2011, 2012**, have been penned down to ensure a high quality of education.³⁶



Under an Act of Parliament viz. **the Dentists Act, 1948 (XVI of 1948)**, the **Dentist Council of India (DCI)** is an established statutory body to regulate **dental education and practice throughout India**. DCI is financed by the Government of India (GoI) in the Ministry of Health and Family Welfare (Department of Health) through a grant-in-aid. The council has articulated various acts and regulations to maintain uniform standards of dental education including courses, training, increase of seats, examinations and other requirements to be satisfied to secure for qualifications recognition under the Act.³⁷



The Indian Nursing Council is a statutory body constituted under the Indian Nursing Council Act, 1947. It is responsible for the regulation and maintenance **of uniform standards of training and nursing** education for nurses, midwives, auxiliary nurse midwives and health visitors. It also recognises institutions/organisations/universities imparting nursing degrees and recognises the degree/diploma/certificate awarded by foreign universities/institutions on areciprocal basis.^{37,38}



The Pharmacy Council of India (PCI) is a statutory body constituted under Section 3 of **the Pharmacy Act, 1948**, which regulates the profession and **practice of pharmacy**. The body is responsible for regulation of pharmacy education in the country for the purposes of registration as a pharmacist under the Pharmacy Act and regulation of the profession and practice of pharmacy.^{37,39}



Telemedicine providers of India must adhere to the legal requirements prescribed in Indian laws, including the **Information Technology Act, 2000; Drugs and Cosmetics Act, 1940; Indian Medical Council Act, 1956 and the Code of Ethics Regulations, 2002**, amongst others. Application of the same rules and regulations for offline and online healthcare initiatives in the country might not be fair, necessitating the need for separate rules and regulations in this field.⁴⁰

Although the Ministry of Communication and Information Technology in 2003 introduced its first policy document describing telemedicine practice standards and legal issues, these recommendations are yet to be legislated.⁴¹



Accreditation in the healthcare sector is of primary importance today, especially in the context of providing greater patient safety and public satisfaction. For any medical tourist coming to India in search of quality treatment, these accreditations could go a long way in building their confidence and establishing patient satisfaction.

National Accreditation Board for Hospitals and Healthcare (NABH) accreditation for the Indian standard of hospital quality is a public recognition of the accomplishment of the accreditation standards by any healthcare service provider. In India, about 300 hospitals have received the NABH accreditation since the past nine years.⁴² Apart from this accreditation, **JCI accreditation** is also momentous for Indian healthcare providers. JCI accreditation is the U.S. standard of hospital quality. India has about 22 JCI accredited healthcare facilities.⁴³ This is indicative of the high international quality standards being embraced by Indian healthcare providers. The central government has instated the **Clinical Establishments (Registration and Regulation) Act, 2010** to provide for registration and regulation of all clinical establishments in the country. This Act aims to establish the minimum standards of facilities and services provided.

Sources: KPMG in India analysis, 2016;

36 Medical Council of India website, <http://www.mciindia.org/>, accessed March 2015;

37 "Medical Education, Training & Research Annual Report 2013-14," MoHFW, accessed 122415;

38 "Indian Nursing Council," INC, <http://www.indiannursingcouncil.org/about-indian-nursing-council.asp?show=about-aim>, accessed 122415;

39 "Pharmacy Council of India," OCI, <http://www.pci.nic.in/GeneralInformation/AboutPCI/Introduction.aspx>;

40 "Global ICT Policies And Strategies And Indian Perspective," Exclusive Techno Legal Centre of Excellence for Lifelong Learning in India, 7 November 2013;

41 "Round-up of Snapshots of Tele-medicine/Tele-care/Tele-rehabilitation and Their Economical and Legal Challenges," Saroj Kanta Mishra, President, Telemedicine Society of India, 2013, accessed 122415;

42 "AHPI newsletter volume 1," Association of Healthcare Providers (India), <http://ahpi.in/ahpi-emailer-2/2.htm>, 040115, accessed February 2015";

43 "JCI-Accredited Organisations," JCI, <http://www.jointcommissioninternational.org/about-jci/jci-accredited-organizations/>, accessed 020615

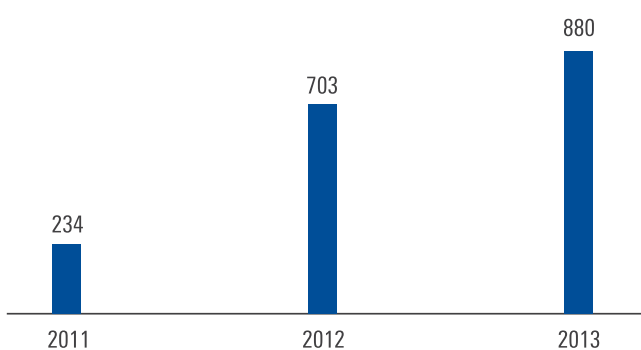
FDI in healthcare

India, one of the principal emerging economies, is currently an important destination for Foreign Direct Investment (FDI), which received a significant boost with the launch of the 'Make in India' initiative. With the demand for affordable quality healthcare rising globally, the nation's healthcare sector is prepared to step into an era of expansion and significant growth.

Foreign investors are expected to play a noteworthy role in this phase of growth. Investment opportunities in the sector have increased significantly over the past five years.⁴⁴ The sector is anticipated to be an attractive investment target for private investors, both PE and VC firms. The sector has been successful in attracting close to USD1 billion from both domestic and foreign financing companies.⁴⁵ PE investments have nearly grown by 400 per cent between 2011 and 2013 for investments into hospitals and diagnostic chains.⁴⁵ Further, the sector has signed about 100 domestic and inbound M&A deals, with the total deal valued at USD3 billion since 2010.⁴⁵

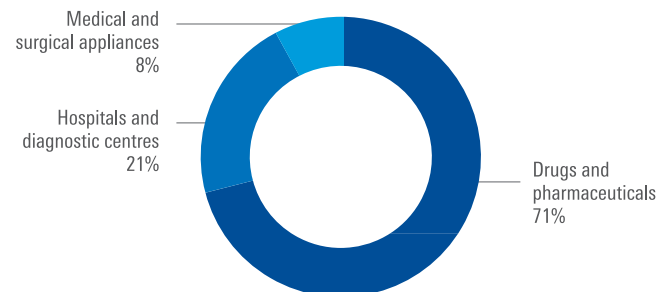
With, the Indian Government raising the FDI cap in the hospital sector to 100 per cent under the automatic route in January 2000, and the robust growth of the sector continuing to rise in line with the demand for quality care, the sector might continue to receive more FDI in the future.⁴⁶

Private equity investments in hospital and diagnostics centres in India (USD million)



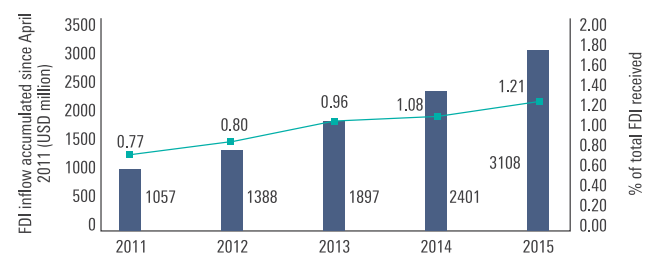
Sources: "Healthcare: The neglected GDP driver-Need for a paradigm shift", KPMG in India, 090215

FDI split amongst the various components of healthcare



Sources: "Foreign investment in hospital sector in India: Trends, Pattern and Issues," Institute for Studies in Industrial Development New Delhi, April 2015, Page 14, 122215

FDI received by the Healthcare Sector (hospitals and diagnostic chains)



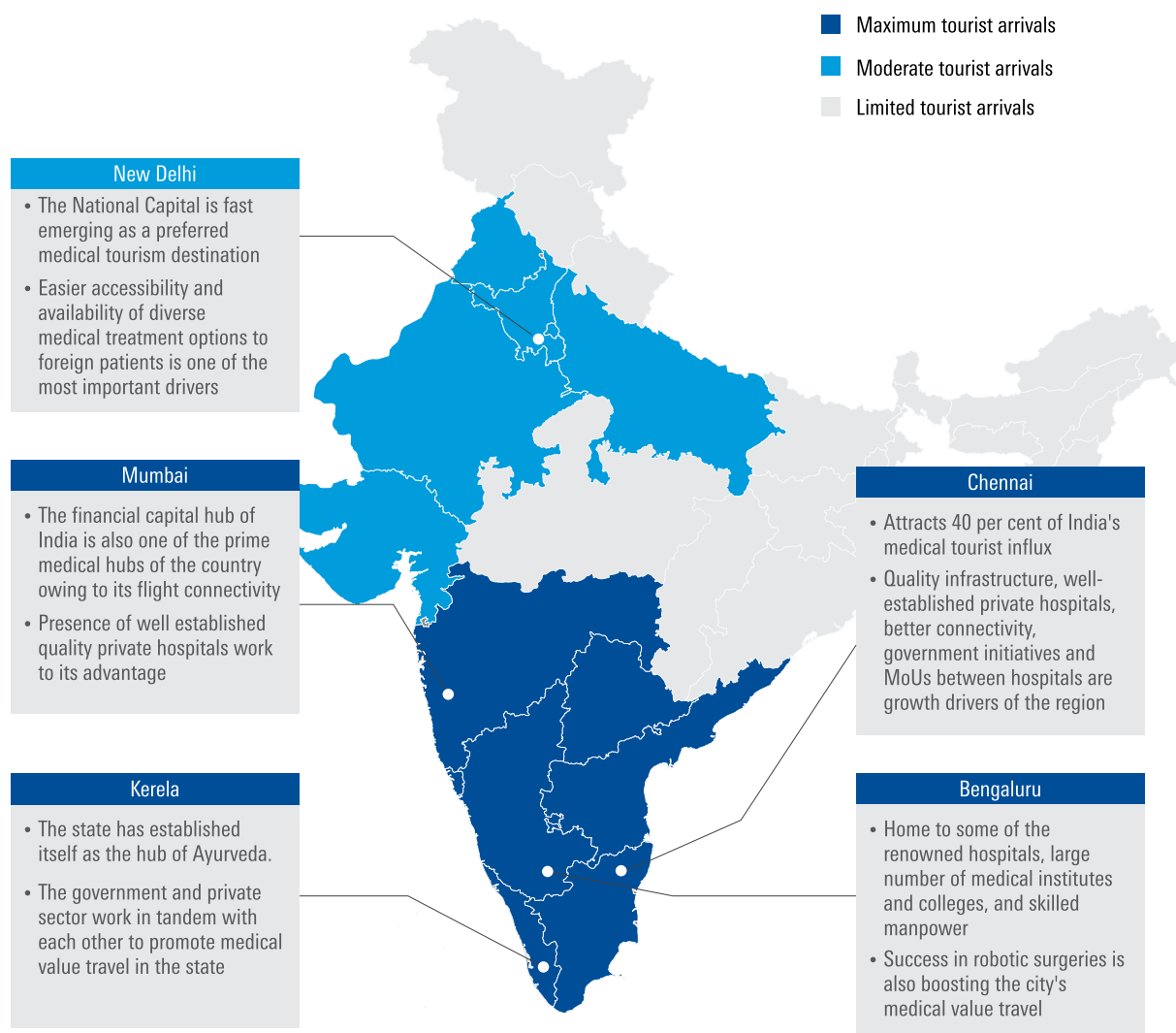
Source: KPMG in India's analysis, 2015; Fact sheet on foreign direct investment (FDI), Department of Indian Policy & Promotion, http://dipp.nic.in/English/Publications/FDI_Statistics/FDI_Statistics.aspx, accessed 071515

Sources: 44 "Healthcare Investment Opportunity," Invest India, <http://www.investindia.gov.in/healthcare-sector/>, accessed 032916; "Knowledge Papers Series 3/2015," FICCI, 2015, accessed 032916;

45 "Healthcare: The neglected GDP driver-Need for a paradigm shift", KPMG in India, 090215;

46 "FOREIGN INVESTMENT IN HOSPITAL SECTOR IN INDIA: Trends, Pattern and Issues," Institute for Studies in Industrial Development New Delhi, April 2015, Page 14, accessed 122215

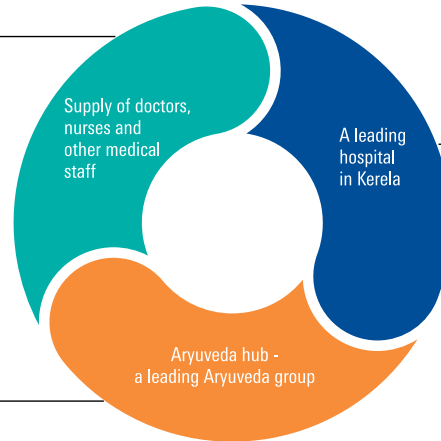
| India's profile in the sector: Healthcare clusters



Source - KPMG in India analysis, 2016 and "Medical Value Travel in India," KPMG, September 2014

| Case study: Kerala-The hub for ayurveda

- The establishment of some of the most early and renowned medical schools in Kerala has led to the creation of a pool of skilled manpower including doctors, nurses and other para-medical staff⁵⁰
- Kerala's commendable healthcare sector achievements also work to its advantage⁵¹



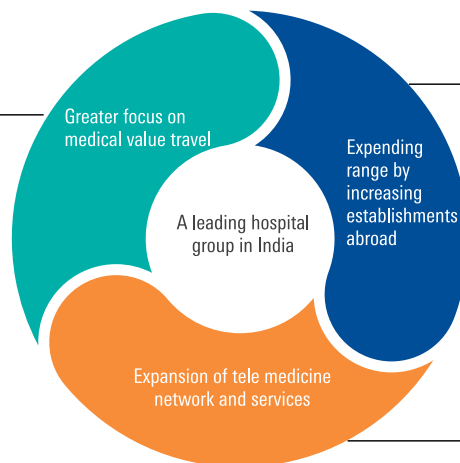
- Airport pick-up, priority appointments with specialists, customised food menu, telemedicine and teleconferencing are some of the facilities offered to overseas patients⁵²

- Green Leaf and Olive Leaf are the two kinds of classification for Ayurveda centres introduced by the Kerala Tourism to keep a check on the quality of Ayurveda⁴⁷
- The organisation is a Green Leaf certified group that develops ayurvedic drugs, and operates spas and health retreats⁴⁸
- It is present in India and at eight other countries. It has plans to enter the US and Egypt markets through JVs and by opening a franchise model, respectively⁴⁹

| Case study: A leading hospital group

The organisation is one of the most prominent Indian healthcare players at the forefront of exporting its healthcare services to the global population

- The hospital group collaborated with a leading airlines company for providing special fares for a round-trip flights to patients and their attendants from more than 19 countries across the Middle East and Africa, coming to its hospitals in India for their treatment⁵³
- The group has been successful in attracting and treating more than 70,000 patients from different corners of the world every year⁵⁴
- It also offers special services to its medical travellers, such as translators, and special menus



- In an effort to share its expertise to treat patients overseas, the group signed an MoU for PPP in healthcare sector with the Tanzania Government⁵⁵
- It also plans to sign a similar agreement with the Zimbabwe Government⁵⁶
- The group tied-up with a leading telecom provider in Nigeria in 2014 to provide telemedicine services to the telecom company's premier customers in that region. Video consultation would be offered to customers with its doctors present in India, with a prior appointment
- Under this set-up, 10 per cent discount is being offered on the consultation fees along with a 5–10 per cent discount on a leading airline's flight travel if patients wish to visit India for any further medical assistance⁵⁷
- In 2012, the group entered into a partnership with AfroIndia Medical Services to set up 30 telemedicine units in Africa⁵⁸

Sources: 47 "Analysis of Tourism demand in Kerala", Kerala Government website, Page 21;

48 Kairali Ayurvedic Healing Village website, Business Standard, http://www.business-standard.com/article/companies/kairali-ayurvedic-heads-abroad-on-bjp-promise-114051000885_1.html, 051014, accessed 030416;

49 "Kairali Ayurvedic heads abroad on BJP promise", Business Standard, http://www.business-standard.com/article/companies/kairali-ayurvedic-heads-abroad-on-bjp-promise-114051000885_1.html, 051014, accessed 030416;

50 "Facilities and Advantages," Lakeshore Hospital, <http://www.lakeshorehospital.com/facilities-and-advantages.html>, accessed 030415;

51 "International Mobility of Nurses from Kerala (India) to the EU: Prospects and Challenges with special reference to the Netherlands and Denmark," Working Paper No.: 405, Indian Institute of Management, Bangalore, April 2013

52 KPMG in India's analysis, 2016; 1- "Apollo Hospitals partners with Airtel Nigeria, bringing Nigeria closer to Apollo's world renowned doctors through its new "Ask Apollo" technology!," Apollo Hospitals, <https://www.apollohospitals.com/news-detail.php?newsid=612>, 102414;

53 "Apollo Hospitals teams up with Emirates Airlines!", Apollo Hospitals, <https://www.apollohospitals.com/news/apollo-hospitals-teams-up-with-emirates-airlines>, 072114;

54 "Reverse Brain Drain: Indian Doctors Come Hometo Medical Tourism Hub," NDTV, <http://www.ndtv.com/world-news/reverse-brain-drain-indian-doctors-come-home-to-medical-tourism-hub-577457>, 061214;

55 "Apollo inks Tanzania's first MoU for PPP in health sector," Business Standard, http://www.business-standard.com/article/economy-policy/apollo-inks-tanzania-s-first-mou-for-ppp-in-health-sector-111052800045_1.html, 052811;

56 "Apollo Hospitals to expand operations in African countries," Business Standard, http://www.business-standard.com/article/companies/apollo-hospitals-to-expand-operations-in-african-countries-114020900424_1.html, 020914;

57 - "Apollo Hospitals signs pact to set up 30 telemedicine units in Africa," Economic Times, http://articles.economictimes.indiatimes.com/2012-09-13/news/33816926_1_chairman-prathap-c-reddy-apollo-hospitals-enterprise-telemedicine, 091312, accessed 030415

Competition to India



	Telemedicine	Medical value travel	Establishment of hospitals abroad	Skills availability
Thailand	●	●	●	●
Singapore	●	●	●	●
Malaysia	●	●	●	●
Philippines	●	●	●	●
U.S.	●	●	●	●
Vietnam	●	●	●	●
Indonesia	●	●	●	●

● Significant Competition
 ● Moderate Competition
 ● Low Competition

Source: KPMG in India's analysis, 2016. The competition assessment is based on a thorough analysis of various parameters available on the secondary domain.

Selection parameters

In case of telemedicine, parameters – such as the presence of an established telemedicine network, presence of a national level strategy, availability of trained professionals and initiatives by the government – have been considered. Thailand, Singapore, Malaysia, Vietnam, Indonesia and the Philippines are currently focussing on strengthening their local telemedicine network to meet the domestic needs.⁵⁷ However, they might serve to be potential competition for India in the coming years, owing to their substantial government support, infrastructure availability and technology advancements.

In case of medical value travel, parameters of cost effectiveness, number of medical tourists, healthcare infrastructure, an amenable legal framework, etc. have been considered. Thailand and Singapore are giving high competition to India owing to their advanced medical specialties, attractive pricing and government support.⁵⁸

In case of establishment of hospitals abroad, the number of hospitals established abroad, support from the government, etc. are considered.

In case of skills availability, parameters such as the number of skilled medical professionals and availability of specialties have been taken into consideration.

Case study: Singapore

Singapore has been ranked sixth among 191 countries with an advanced healthcare infrastructure. The country has established itself as a leading healthcare service provider owing to its advanced medical infrastructure and highly skilled doctors to treat complicated medical cases. The government is also promoting export of healthcare services with initiatives – such as collaboration between the Singapore Tourism Board and private healthcare players to strengthen their position in the foreign market. The government is also signing agreements with other countries to promote medical value travel in tourism. Moreover, an easy medical visa facility by the government has facilitated growth.

Key Learnings

- Simplification of visa norms for medical tourists
- Investments in building infrastructure in the medical hubs to attract medical tourists
- Government support in promoting India as a medical tourism hub

Sources: 57 KPMG in India's analysis, 2016,

58 "Medical Value Travel in India," 090214, KPMG in India

India's profile in the sector: Strategies to promote growth

Past	Current	Future
<p>Issuance of a medical visa</p> <ul style="list-style-type: none"> Issuance of medical visa to promote health value travel <p>Promotion of healthcare delivery</p> <ul style="list-style-type: none"> Subsidised land offerings in various locations <p>Promotion of skills</p> <ul style="list-style-type: none"> Developing sophisticated educational infrastructure to deliver high quality healthcare workforce <p>Promotion of the technology sector</p> <ul style="list-style-type: none"> Government is actively promoting technology sector development with efforts to create a high-speed broadband network infrastructure 	<p>Promotion of brand India</p> <ul style="list-style-type: none"> 'Incredible India' campaign to promote India as tourist destination Visa-on-arrival to 150 nations <p>Promotion of healthcare quality</p> <ul style="list-style-type: none"> Clinical Establishment Act 2010 Promotion of accreditations, such as NABH, in the new health policy draft <p>Promotion of AYUSH</p> <ul style="list-style-type: none"> Special focus on alternative medicine in the National Health Policy 2015 draft <p>Promotion of Yoga</p> <ul style="list-style-type: none"> Recognising contributions to yoga as tax free Promotion of yoga by campaigning for the International Yoga Day 	<p>Joint promotion between the government and the provider</p> <ul style="list-style-type: none"> Promotional activities to exhibit the services of healthcare providers Promotion of medical value travel under the banner of 'Incredible India' <p>Medical visa on arrival</p> <ul style="list-style-type: none"> For services, such as yoga, ayurveda as well as other allied sciences, issuance of visa on arrival <p>Tele-health promotion</p> <ul style="list-style-type: none"> Framing telemedicine laws and regulations Increasing acceptability of telemedicine and tele-diagnosis Collaborations between insurance firm and tele-health providers to create customised products

Source: KPMG in India's analysis, 2016

Existing capabilities	The Need Going forward
<ul style="list-style-type: none"> India has 398 registered medical education colleges, 305 dental colleges, 513 AYUSH colleges, 4,718 nursing colleges and 723 pharmacy colleges that support the current healthcare system⁵⁹ Further, healthcare has been recognised as one of the key sectors within the National Skill Development Corporation (NSDC)⁶⁰ Healthcare Sector Skill Council (HSSC): A NGO created with the aim to build a robust ecosystem for value-based vocational education and skill development healthcare space.⁶¹ Additionally, the HSSC aims to serve as a single source of information in the healthcare sector with specific reference to skill and human resource development in India <ul style="list-style-type: none"> Further, it is responsible for implementation of the Standard Training and Assessment Reward (STAR) scheme launched by the Indian Government⁶² A leading healthcare training and education company has offered job-oriented programmes within the healthcare space.⁶³ 	<ul style="list-style-type: none"> Development of soft skills that are patient-centric to the healthcare delivery system Promotion of foreign languages in the healthcare education curriculum to help patients from different nationalities Promote adequate skills that help develop innovative healthcare delivery models Promotion and development of AYUSH and yoga skills Develop adequate international marketing skills that promote India as a destination for healthcare tourism, as a part of the 'Incredible India' campaign.

Source: KPMG in India's analysis, 2016;

59 National Health Profile 2015, Central Bureau of Health Intelligence, 2015;

60 NSDC Reports by Industry, NSDC, <http://www.nsdcindia.org/nsdcreports>, accessed 031516;

61 Healthcare Sector Skill Council, NSCS India, <http://nscsindia.org/ExploreSectorSkillCouncilDetail.aspx?SSC=Mg==>, accessed 030416; 4-Sector Skill Councils, NSCS India, <http://nscsindia.org/ExploreSectorSkillCouncils.aspx>, accessed 030416;

62 VIVO Healthcare, <http://vivohealthcare.com/>;

63 "FAQ on Micro, Small and Medium Enterprises," Ministry of Micro, Small & Medium Enterprises, <http://msme.gov.in/web/portal/FAQ.aspx>, accessed 030416;

SMEs in the healthcare sector



The Micro, Small and Medium Enterprise (MSME) sector is expected to play an important role in the Indian economy. The development of this sector is important to generate employment in urban as well as rural areas. According to the definition laid down by the Government of India⁶⁴, investment in equipment could not increase beyond INR5 crore for an MSME in the services sector. As per this criteria, hospitals with a bed capacity of 50⁶⁴ or less may be considered as an MSME, as the typical investment per bed is in the range of USD24,000–32,000. These hospitals could provide primary and secondary care with a focus on day care services, general medicines, eye care, small surgeries, etc. There are about 5,000 private hospitals present in India and about 80 per cent of these hospitals are in the 20–100 bed range.⁶⁵

Emerging healthcare delivery models, such as those of single specialty clinics, diagnostic chains and pathology labs, are likely to add to the SME pie of the healthcare sector. These models are typically light asset ventures and have attracted significant investments owing to their scalability and economic viability.

Language requirements

- Interpreters in major languages are required in all accredited hospitals treating foreign patients.
- More focus on foreign languages of the SAARC region, which is a major contributor to medical value travel can also be addressed.

Source: 64 "FAQ on Micro, Small and Medium Enterprises," Ministry of Micro, Small & Medium Enterprises website, accessed March 2015;

65 "Hospital market in India Part II," Netscribes India report, February 2014 "Hospital market in India Part II," Netscribes India report, 02 2014, 030416



I Strengths and opportunities for Indian Healthcare Sector

Strength

- High quality service at a very affordable price
- Presence of qualified doctors, nurses and other healthcare staff
- Strong presence in advanced healthcare e.g., organ transplants and cardiovascular procedures with high success rate
- Less/no waiting times in hospitals for admission and treatment
- Availability of medical insurance facilities
- Easy access and connectivity to healthcare destinations
- Availability of medical visa service with visa-on-arrival issued to 150 nations
- Well-established and recognised IT sector
- Good air connectivity with major medical tourism markets
- Fluent English-speaking hospital staff
- International patient wards with special desks in many hospitals to cater to the travel, translation and dietary requirements of medical tourists exclusively
- Government's focus on Healthcare and its supporting sectors is strong

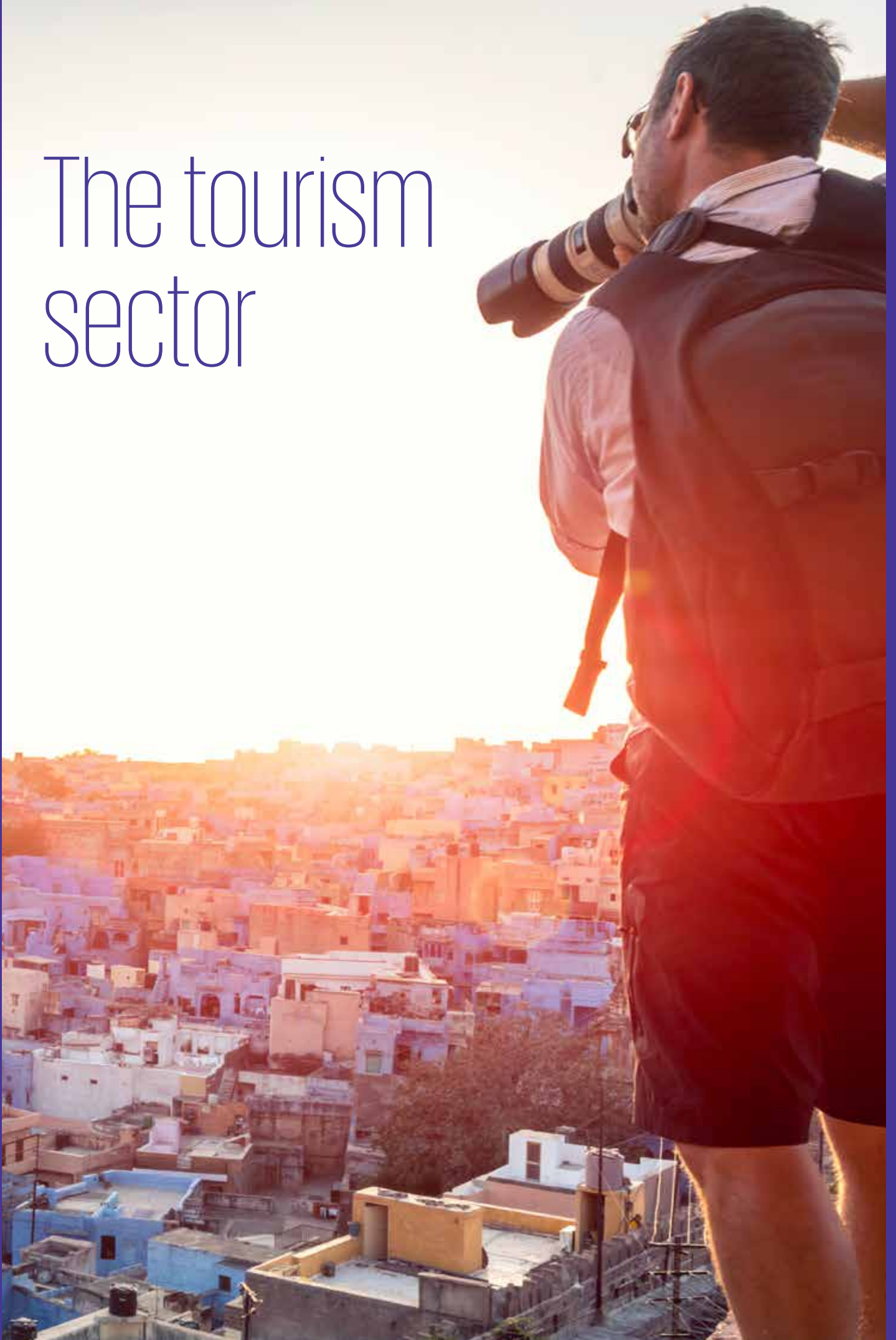
Opportunity

- Increased demand for healthcare services from developed countries due to rising cost of healthcare
- Increased demand for wellness tourism and alternative cures
- Reduced cost of international travel and tourism facilities
- Availability of alternative medicine in form of AYUSH and practices, such as yoga
- Long waiting time for treatment
- Growing privatisation and investment opportunities (through FDI) in Tourism and Healthcare sectors in India
- Package deals for flights, transfers, hotels, treatment and post-operative vacation, for the patients and their families
- Increasing joint ventures opportunities with health insurance, tour operators, hospitals, resorts, etc.
- Increasing collaboration between healthcare providers with insurance for tele-medicine offerings
- Increasing collaboration with other countries to establish healthcare facilities

Source: KPMG in India's analysis, 2016;

66 "Visa on Arrival Now for 150 Countries, Up From 40-Odd Today," NDTV Profit, http://profit.ndtv.com/news/budget/article-visa-on-arrival-now-for-150-countries-up-from-40-odd-today-743155_022815, accessed 03/29/16

The tourism sector



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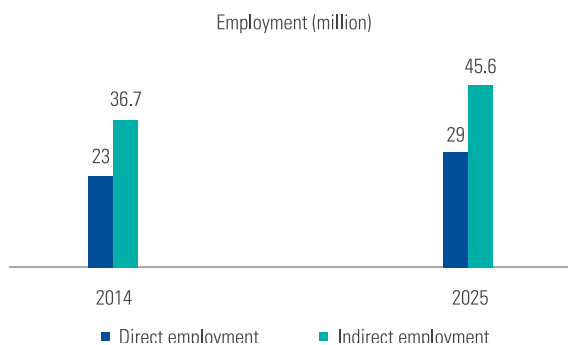
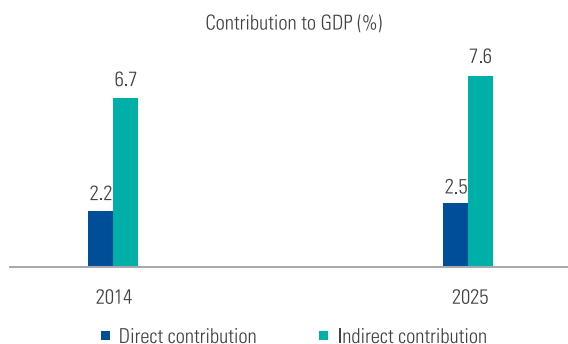
Tourism overview



| Sector overview

The tourism sector is one of India's largest services sectors, and has proved to be a key contributor to India's economic development and employment generation. The sector comprises of travel, tourist attractions, travel agents and tour operators. It is also one of the top generators of foreign exchange. Moreover, its performance impacts other sectors such as hospitality, food and beverage, retail and recreational services. These factors make tourism a pivotal sector for India's growth.

Travel and tourism's contribution to the nation



Source: Travel & Tourism Economic Impact 2015 India, World Travel and Tourism Council, 2015

| Size and growth

India's tourism sector (including hospitality) was valued at USD122.1 billion in 2013 and is expected to grow at a CAGR of 16.7 per cent to reach USD481.9 billion by 2022¹, placing it amongst the high-growth industries of India.

The sector is expected to continue on its growth trajectory as the government supports the sector by upgrading physical infrastructure, creating integrated tourist circuits and building new airports, among others. These steps are expected to improve connectivity and promote various products to increase the scope of inbound tourism.

Some of the positive features and trends of India's tourism sector include:

- **GDP contribution:** The total contribution to India's GDP was approximately USD125.2 billion (6.7 per cent) in 2014. By 2025, tourism's contribution is pegged at USD259 billion, or approximately 7.6 per cent of India's GDP.²

Growth drivers

- Government and policy support
- Diverse tourism products (destinations)
- Rising disposable income

Sources: 1 Tourism and hospitality sector report, IBEF, August 2014;

2 Travel & Tourism Economic Impact 2015 India, World Travel and Tourism Council, 2015;

- **Employment growth:** In 2014, tourism directly and indirectly supported 23 million jobs and 13.7 million jobs, respectively. By 2025, the total contribution to employment is expected to grow to 45.6 million.²
- **Domestic spend:** Tourism spend in India is dominated by domestic tourists. Approximately 81 per cent of the spending comes from them, while the rest from foreign tourists.²
- **FDI inflow:** The government has allowed 100 per cent FDI through the automatic route in the tourism sector, which has led to a steady rise in FDI, necessary for the development of the sector. During January to September 2015, tourism (including hospitality) received FDI worth USD750 million.³

to attract more foreign tourists. The demand for tourism is significantly high globally and to capture a higher share, the Indian tourism sector could further create awareness of its services and distinct attributes in the potential markets to receive a higher number of arrivals.

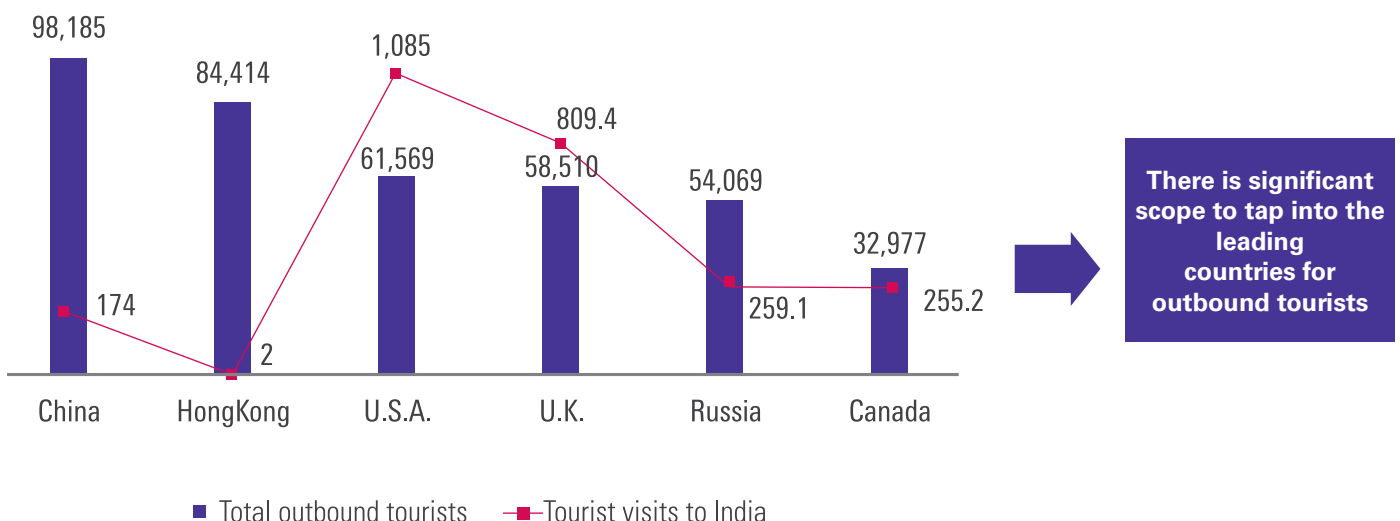
Countries with the highest number of tourists going abroad are the potential markets for India to focus on. China is ranked the highest, globally, in outbound tourists as well as the highest in tourist expenditures made by people of a country⁴ with rising income. Also, emerging economies, such as China, have shown an appetite for outbound tourism. Further, the developed markets of the U.S., the U.K. and Canada continue to enjoy a sizeable share of tourists opting for outbound tourism.

I Demand for tourism

In both years 2013 and 2014, about 1.1 billion people travelled abroad globally.⁴ However, India only recorded foreign tourist arrivals of 7.7 million in 2014⁵, or approximately 0.7 per cent of all tourists worldwide. This highlights the fact that India has a lot of ground to cover to get featured amongst the top countries in international tourism. The country possesses the necessary resources

As is evident, notwithstanding political issues, China being a neighbouring country offers significant potential to the Indian tourism sector. In addition, there is also scope for attracting tourists from other neighbouring countries, such as Nepal and Sri Lanka, largely due to their proximity. Developed countries in North America and Western Europe are other regions that could be targeted.⁶

Total outbound tourists of the top-five countries and their arrival in India in 2013 ('000)



Note: International outbound tourists are the number of departures that people make from their country of usual residence to any other country for any purpose other than a remunerated activity in the country visited. The data on outbound tourists refers to the number of departures, not to the number of people traveling. Thus a person who makes several trips from a country during a given period is counted each time as a new departure.

Sources: International tourism – number of departures, World Bank website, accessed 20 January 2016 <http://data.worldbank.org/indicator/ST.INT.DPRT>; "Indian tourism statistics at a glance 2014," Ministry of Tourism, GOI

³ "FDI statistics December 2015" DIPP website, accessed 12 January 2016, http://dipp.nic.in/English/Publications/FDI_Statistics/FDI_Statistics.aspx

⁴ "Tourism highlights 2015," UNWTO;

⁵ "Indian tourism statistics at a glance 2014," Ministry of Tourism, GOI; ⁶ International tourism – number of departures, World Bank website, accessed 20 January 2016 <http://data.worldbank.org/indicator/ST.INT.DPRT>;

⁶ "Indian tourism statistics at a glance 2014," Ministry of Tourism, GOI, ⁶ KPMG in India analysis When we say KPMG in India's analysis it would have to be based on some other primary research. Please mention the same here as we need to give them credit. Changes need to be carried out across the publication.

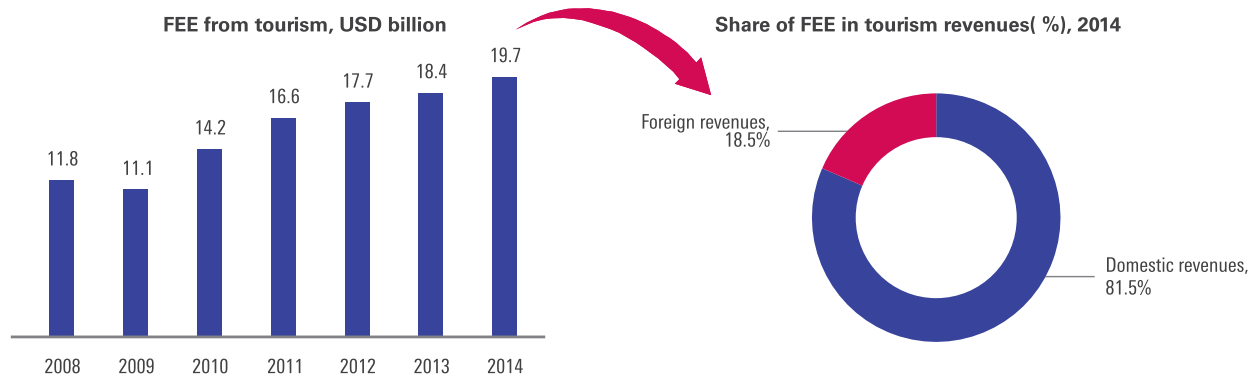
India's profile



India's profile: Tourism exports

For tourism, consumption of services by domestic and foreign tourists is the primary source of revenue. In 2015, India is estimated to have received USD109.6 billion in revenue from domestic and foreign tourists.⁷ However, domestic travellers are major contributors with a share of about 81 per cent.¹ Given India's distinct landscape, and diverse culture and heritage, it has the potential to become one of top go-to destinations in the world.

In tourism, exports occur when foreign tourists visit India and consume services provided by participants in the sector. With the rise of foreign tourists in India, tourism earnings are witnessing an increase. In 2014, tourism contributed USD20.2 billion to Foreign Exchange Earnings (FEE)⁸ making it one of the highest FEE sectors in the country. This growth could be attributed to diverse tourism offerings, and policy and infrastructural support by the government, such as simplification of visa procedures.



Sources: "Indian tourism statistics at a glance 2015," Ministry of Tourism, GOI; "Performance of Tourism Sector during December 2014," Ministry of Tourism, GOI; "Travel and Tourism Economic Impact 2015: India," WTTC

The sector's growth is dependent upon the rise in Foreign Tourist Arrivals (FTAs) and the increase in domestic visits (by resident citizens), along with rise in spending by both sets of travellers. The rise in FTAs in India is dependent upon the fulfilment of India's vast untapped tourism potential and exploiting it to transform India into

a favoured destination for tourists around the world. Visits by domestic tourists (which are expected to continue to be a dominant segment) and the consumption of services are likely to increase as the disposable income rises along with greater opportunities to travel.

Source: 7"Travel and Tourism Economic Impact 2015: India," WTTC, 2015;

8"Indian tourism statistics at a glance 2014," Ministry of Tourism, GOI, 2014

The tourism sector has emerged as one of the fastest growing sectors contributing to global economic growth and development. While Europe and the U.S. have remained among the top tourism markets, new markets are also expected to witness a healthy growth in international tourist arrivals, by offering cheaper yet modern services at the same time.

Although India's share in attracting outbound tourists globally is low (0.67 per cent), the 7.7 million FTAs in 2014 made it the largest tourism destination in South Asia.¹⁰ The fact that the regions of Asia and the Pacific witnessed a strong growth in 2015¹⁰ (in tourist arrivals) goes on to show that international tourists are open to move away from mature tourist markets and explore exotic destinations.

The contribution of tourism to global GDP was USD76 trillion in 2014, whereas India contributed USD125.2 billion or about 2 per cent.⁹ Although India's share seems to be low, its global 2014 ranking in the tourism sector's direct contribution to the country's GDP was 12, and the contribution is more than double of the

global average of USD58.3 billion.⁹ The sector is thriving due to steadily increasing FTAs, which grew at a CAGR of 5.9 per cent during 2008-14 and are expected to increase further to 13.4 million by 2024, as popularity of Indian tourism grows internationally.⁹

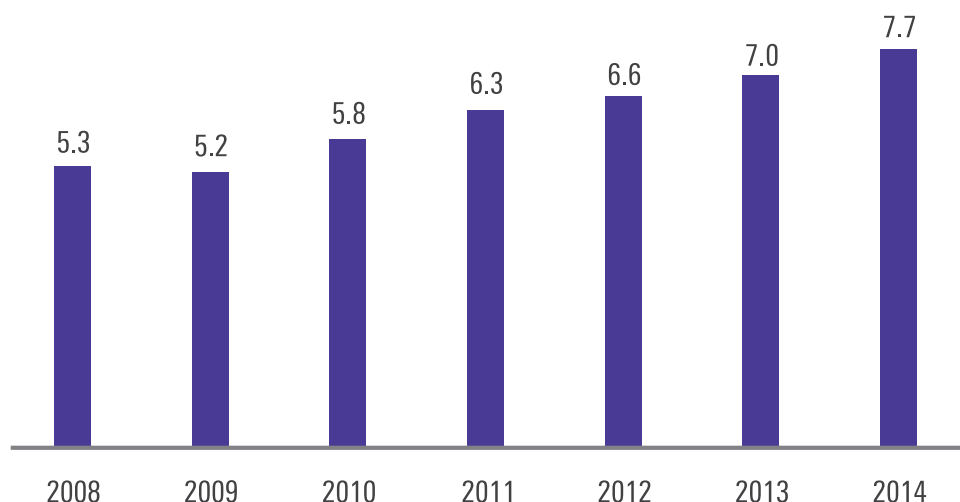
That said, there has also been a substantial increase in the number of Indians travelling within the country for leisure purposes.

On an average, in 2014, a foreign tourist spent approximately USD2,623 in India, which is expected to rise further as tourists are likely to stay longer during their holidays in the future.⁹

Promotional activities through television commercials and aggressive advertising campaigns (such as Incredible India) by the central government, and state governments campaigns are expected to play a fundamental role in increasing the number of domestic visits and foreign arrivals.

Contribution of India's tourism sector to global GDP was USD125.2 billion in 2014, double the global average of USD58.3 billion

FTAs in India (in millions)

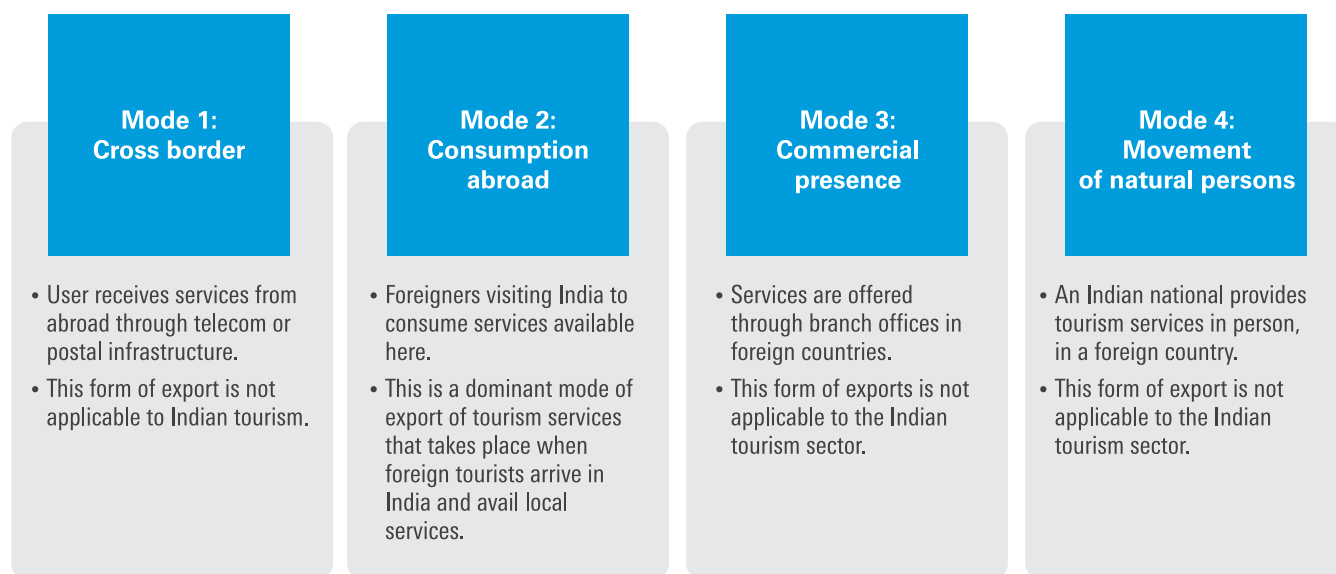


Sources: "Indian tourism statistics at a glance 2015," Ministry of Tourism, GOI; "Performance of Tourism Sector during December 2014," Ministry of Tourism, GOI; "Travel and Tourism Economic Impact 2015: India," WTTC

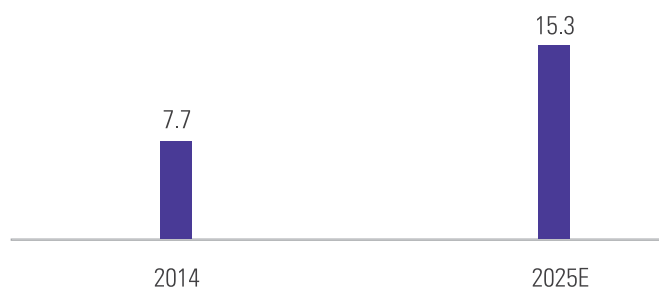
Sources: 9 "Tourism highlights 2015," UNWTO; Incredible India website, accessed 20 January 2016 <http://incredibleindia.org/>

10 "Travel and Tourism Economic Impact 2015: India," WTTC, 2015,

| India's profile: Mode-wise potential¹¹



Foreign tourist arrivals in India (in million)



Source: *Travel & Tourism Economic Impact 2015 India*, World Travel and Tourism Council, 2015

As one of the fastest growing destinations for international tourist arrivals in Asia, the scope for export of tourism services through Mode 2 is ever-increasing. Projections made by the World Council for Travel and Tourism show that FTAs in India are expected to grow 6.3 per cent annually between 2015 and 2025 to 15.3 million.¹²

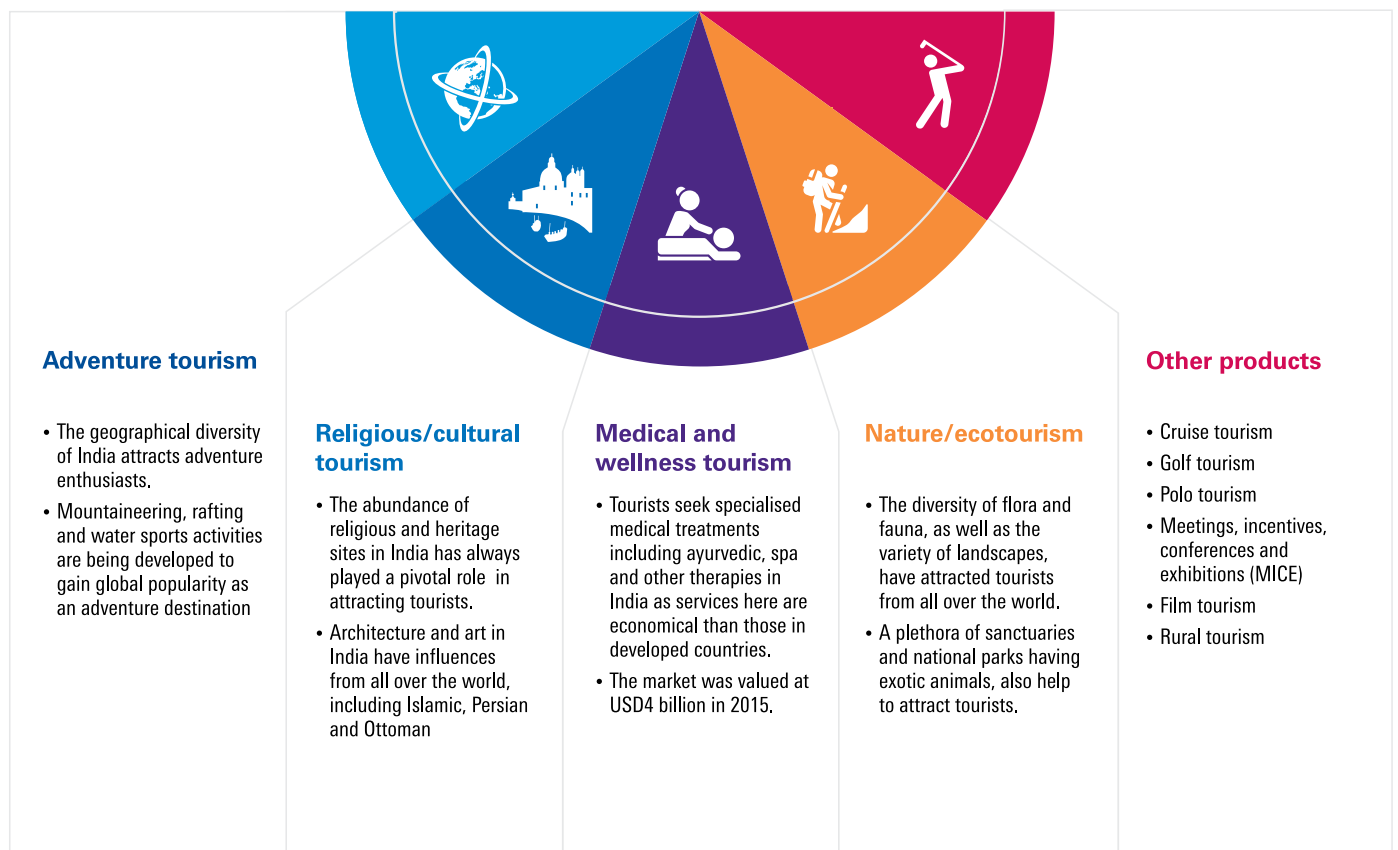
These projections also suggest that the revenue earned (FEE) due to FTAs would grow to USD37 billion by 2025.¹²

Sources: ¹¹ KPMG in India analysis;

¹² *Travel & Tourism Economic Impact 2015 India*, World Travel and Tourism Council, 2015

I India's profile: Services offered

India has 28 world heritage sites and 25 bio-geographic zones.¹³ The country is broadening its tourism scope through new products, such as rural, adventure, wellness, medical and eco- tourism, which find relevance in India's diverse topography and specialisations. The Ministry of Tourism has been promoting these forms of tourism, with an aim to increase the inflow of tourists in the country.



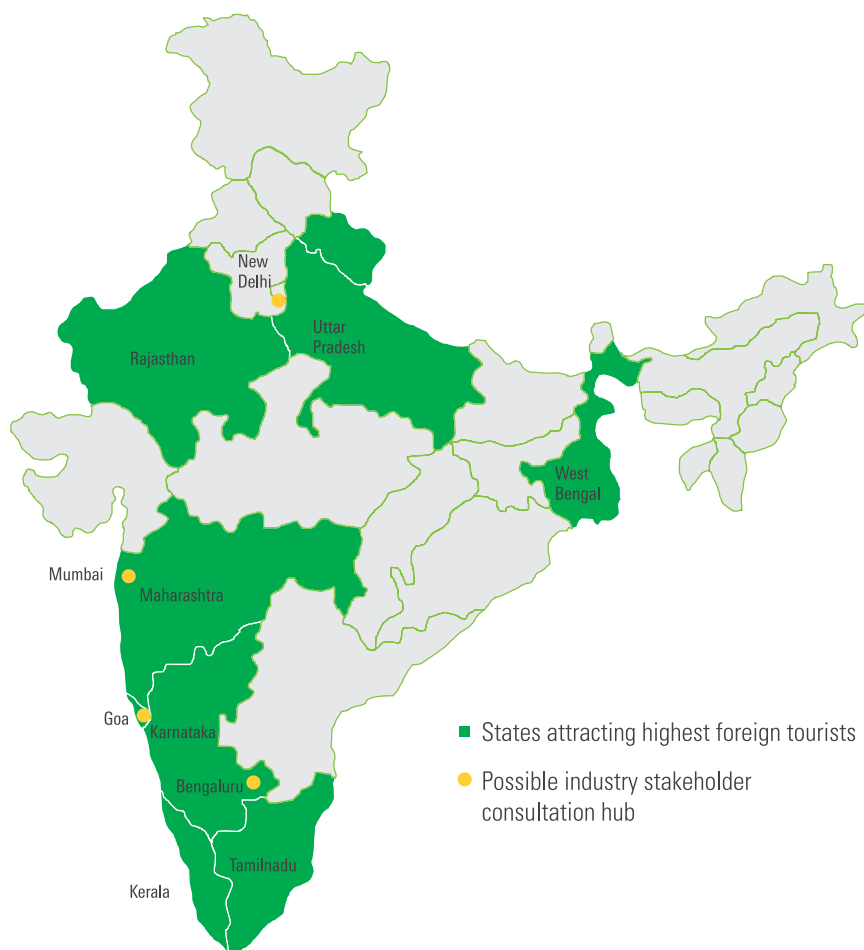
Source: 13 Tourism and hospitality sector report, IBEF, August 2014; 2 "Medical Tourism in India: Progress, Opportunities and Challenges," Madras School of Economics, 2015; 3 Annual Report 2014-2015, Ministry of Tourism, GoI

| India's profile: States attracting highest FTAs¹⁴

Foreign tourists arriving in various parts of India depends on the distinct attributes offered by the region. The states of Tamil Nadu, Karnataka and Kerala are primarily the attraction for medical tourists. New Delhi and Mumbai are the largest hubs in India for business travel. On the other hand, tourism in Uttar Pradesh, Rajasthan and Goa is driven by leisure and adventure activities due to the abundance of heritage sites, places with natural beauty and the scope for carrying out leisure activities.

The cities of **Mumbai, New Delhi, Chennai and Agra, as well as some other states including West Bengal, Rajasthan, Karnataka, Kerala and Goa** — attract the highest number of tourists for leisure, business, adventure and medical tourism. Metropolitan cities and large Tier I cities serve as centres of tourism.

Spread of foreign tourists visiting India



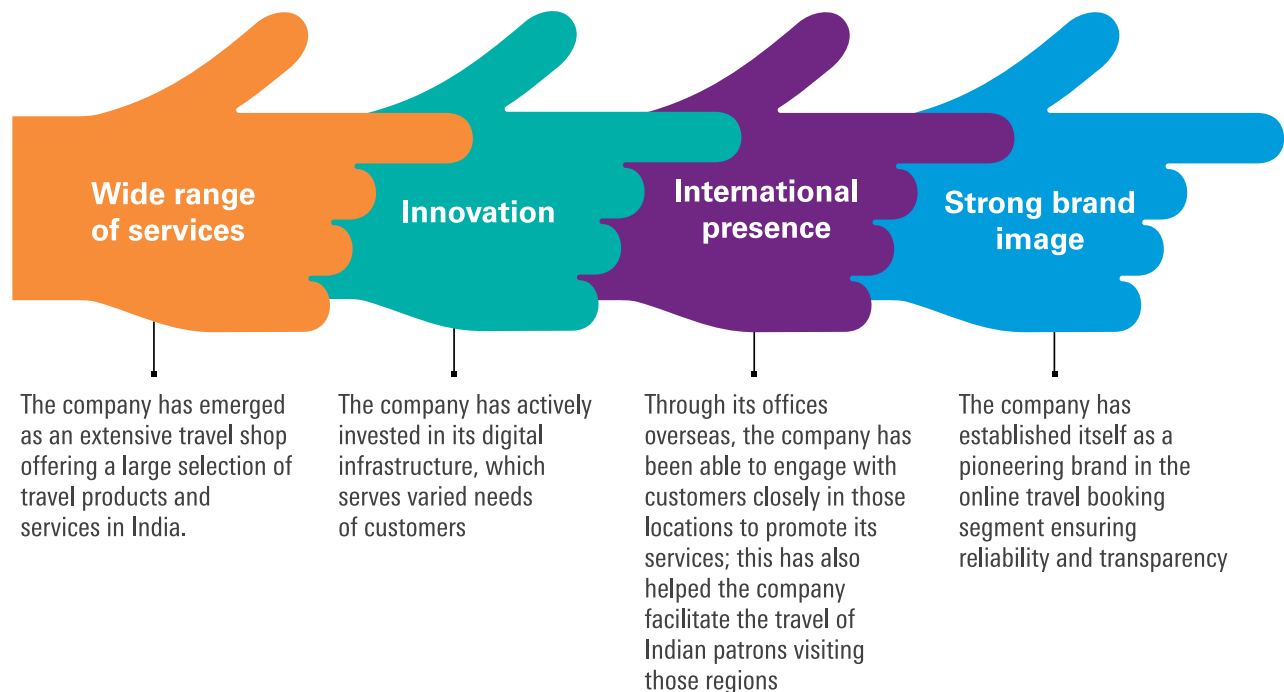
Sources: 14 "Indian tourism statistics at a glance, 2014" Ministry of Tourism, GOI

| Case study: The largest Indian online travel company



- The company, founded in 2000, is one of the leading online travel companies in India and is headquartered in Gurgaon, Haryana.
- It started its operations in the India – U.S. travel market, went for an IPO in the U.S., and was listed in 2010.
- It was able to capture a sizeable market share by capitalising on the local market knowledge and through the application of technology.
- It considers South-East Asia as its key market for growth, and has established international presence by having offices in Singapore, the U.S., Bahrain, Kuwait and the U.A.E.
- Its presence in markets outside India has helped the company to attract foreign tourists to India that contributes significantly to its export revenues.
- It has pursued growth through M&A in the travel technology space.
- It has recently floated a fund worth USD15 million to invest in ventures operating in the travel and tourism space, focussing on mobile and IP-based start-ups.¹⁵
- To facilitate better experience for overseas customers, it has partnered with an international payment gateway, for secured payment transactions when booking international flights and holiday packages.¹⁶

| Success factors



Source: MakeMyTrip website, accessed 20 January 2016 https://www.makemytrip.com/about-us/company_profile.php;

¹⁵ "MakeMyTrip's early stage investment fund is an extension to M&A strategy: Magow," VCCircle, 22 September 2014; "Case Study: MakeMyTrip, India – An emerging market travel technology pioneer," Amadeus, 11 July 2014; "MakeMyTrip, India's E-Commerce Darling, Changes Course and Stretches Out," Forbes, 27 November 2012;

¹⁶ "MakeMyTrip joins hands with PayPal," The Economic Times, 30 July 2012

I India's profile: Strategies to promote growth

Since tourism was recognised as a distinct industry by various states, the Government of India and the Ministry of Tourism have made sustained efforts to develop quality tourism across India. While state governments have framed their tourism policies as per their needs and have devised strategies to attract more tourists, the central government continues to play a pivotal role in announcing initiatives and monetary allocations to develop the tourism sector in the country as a whole.

Over the years, the central government's plan and vision to promote Indian tourism has evolved, in line with the changing needs and challenges.

Past¹⁷

- A National Policy on Tourism was announced in 2002 aimed at the development of robust infrastructure with emphasis on:
 - Inclusion of tourism in the concurrent list of the Constitution of India
 - Constitution of a Tourism Advisory Council with key stakeholders to act as a 'think tank'
 - Plan and implement an integrated communications strategy to be called as 'National Tourism Awareness Campaign'; creation of 'Brand India'
 - Visa on arrival
 - Improvement of the standard of facilities and services at major airports in the country
 - Creation of a special tourism police force
 - Improving and expanding product development
 - Creating leading infrastructure
- The government started marketing campaigns, such as 'Incredible India' and 'Atithidevo Bhava'
- In the National Action Plan 1992, emphasis was laid on the development of tourist destinations. Private players were invited and special focus was laid on strengthening institutions for manpower development
- In 1989, the Tourism Finance Corporation of India was established to finance tourism projects across the country
- The National Tourism Policy 1982 assigned the development of international tourism to the central government and promotion of domestic tourism to state governments.

Present

- Visa on arrival has been implemented for 113 countries¹⁸; and an e-visa facility has also been initiated for some countries
- The government has announced new product offerings related to tourism¹⁹
- A new campaign was launched by the Ministry of Tourism to promote women safety in India titled 'I respect women'¹⁹
- A New Tourism Policy was launched in May 2015 to spearhead the growth of the sector and define an action plan.²⁰

Sources: 17 *Imagine India - The land of untold stories and unseen destinations – Tourism Vision 2030*, KPMG in India and Experience India Society;

18 E-Visa Online website, GOI, accessed 19 January 2016 <https://indianvisaonline.gov.in/>;

19 "Statement Containing Brief Activities of the Ministry of Tourism, 2013;

20 Press Information Bureau, GOI, 18 March 2015

Future

- Visa on arrival is expected to be offered to a total of 180 countries²¹
- Upgrading and renovating various heritage sites across India, including landscape restoration, parking facilities, access for the differently-abled and visitors' amenities, have been planned²¹
- Implementation of e-catering services in trains across India has been proposed to enhance customer experience²²
- The Ashok Institute of Hospitality and Tourism Management (part of the HRD division of the India Tourism Development Corporation Ltd. (ITDC), a PSU under the Ministry of Tourism), might set up a Centre of Excellence in Hospitality Education, in New Delhi; this is likely to contribute towards enhancing workforce quality needed to run the sector²³
- A National Tourism Authority is expected to be set up that may undertake execution of all policies as laid out in the Tourism Policy 2015; this is a step toward detaching decision-making from execution²⁴
- A Medical Tourism Promotion Board is expected to be established to work with the industry to develop a plan to boost medical tourism in the country²³
- Under the new Tourism Policy 2015, the following has been proposed:²⁴
 - Formation of the National Tourism Board to be headed by the Union Tourism Minister
 - To enlist more heritage sites under the UNESCO World Heritage list
 - Establishment of regional councils in different regions
 - Policy for vintage cars
 - Inter-ministerial coordination committee headed by the PMO
 - Special Tourism Zones similar to SEZs
 - Designated funds for protection of monuments
 - Steps to enable Archeological Society of India-maintained archaeological monuments to be explored post sunset
 - To invite international TV series/programmes e.g., Master Chef Australia and the Survivor and others, for conducting reality shows similar to theirs
 - To appoint ex-servicemen and trained volunteers at major tourist spots
 - Free Wi-Fi at different tourist centres across the country.

Source: 21 E-Visa Online website, GOI, accessed 19 January 2016 <https://indianvisaonline.gov.in/>;

22 Railway Budget 2015, Railway Ministry;

23 Press Information Bureau, GOI, 27 September 2015;

24 "New Tourism Policy to Make India Incredible," *The New Indian Express*, 3 May 2015

Competition



FTAs in India have increased over the years with a growing popularity of attractions in the country. However, the Indian tourism sector faces stiff competition from other parts of the world in attracting international tourists. The volume of foreign tourist coming to India annually suggests that there is immense potential for India to increase its share in the global tourism pie. Globally,

Europe witnessed the highest number of FTAs in 2014 at 457 million (over half of the total global FTAs in that year).²⁵ The Americas also performed strongly with 181 million tourist arrivals in 2014, as did the Asia-Pacific region with 263 million international arrivals.²⁵ About 50 million foreigners visited the Middle East and 53 million visited Africa in 2014.²⁵

Global	
Country	FTAs in 2014 (million)
France	83.7
Unites States	74.8
Spain	65
China	55.6
Italy	48.6
Turkey	39.8
Germany	33
United Kingdom	32.6
Russia	29.8
Thailand	24.8

Source: United Nations World Tourism Organisation

Asia	
Region/country	FTAs in 2014 (million)
China	55.6
Thailand	24.8
Malaysia	27.4
Hong Kong	27.8
Macau	14.6
Korea	14.2
Singapore	11.9
Japan	13.4
Indonesia	9.4
Taiwan	9.9

Source: United Nations World Tourism Organisation

As evident, India not only faces stiff competition from countries in other continents, but also from other Asian countries — top destinations in the region attract foreign tourists several times higher than what India does. These countries display some common characteristics that have enabled them to become the preferred destination for international travellers.

I Leading practices of competitors²⁶

Strengths displayed by leading countries

- The U.S., France and Spain have developed sound infrastructure in the form of amenities to provide an enjoyable experience to tourists visiting the countries.
- Such countries have also developed and maintained a variety of tourist destinations within the country that could offer choices and options to tourists. Cleanliness and upkeep of tourist sites have been given utmost importance.
- Countries have also invested heavily on the support structure that facilitates tourist movement within the country. Roads, railways and airports have been developed in and around destinations, to facilitate easy access.
- Skill development has also been undertaken by the government in some countries to make the sector more conducive for foreign tourists. Language and other skills are being imparted through government programmes.
- Extensive marketing and promotional campaigns by the concerned governments of the countries have helped increase their popularity among global tourists.

Competition: Enhancing tourism services exports from India²⁷

- **Invite greater private participation in archeological and heritage tourism:** Private participation in the maintenance and upkeep of archeological and heritage sites are expected to help ensure the availability of funds necessary for such activities. Maintenance is a major challenge when developing heritage tourism, which could be addressed through a PPP model. This is likely to provide more and better destinations to attract domestic as well as foreign tourists.²⁷
- **Create an all-round experience for tourists:** Along with the development of sightseeing sites, efforts are desired for providing an all-round experience to tourists through the presence of tour guides, children's activities, availability of food outlets offering international cuisines, etc. These steps might ease tourists stay in India to engage them holistically, and increase the chances of repeat arrivals.²⁷
- **Build better tourist infrastructure:** Quality roads, railways and aviation infrastructure are required to develop new tourist sites and improve the accessibility of existing destinations. In addition, improving tourist amenities could be outlined as a priority — availability of quality food and refreshments, conveniences, information centres and other necessary infrastructure.²⁷
- **Promote new forms of tourism:** While the government has been promoting India as a tourist destination, new forms of tourism could be separately highlighted. Medical and religious tourism, amongst others, could be specifically marketed. This shall help in making the global tourist population aware of new and distinct opportunities that India offers as a tourism destination.²⁷
- **Facilitate the arrival and travel of foreign tourists:** Special measures could be undertaken to make travel and lodging arrangements of foreign tourists easier and more convenient. Cultural and linguistic considerations could be kept in mind while developing amenities and tourism infrastructure.²⁷

Source: ²⁶ KPMG in India Analysis

²⁷ KPMG in India Analysis

²⁸ Imagine India - The land of untold stories and unseen destinations – Tourism Vision 2030, KPMG in India and Experience – India Society

| Strengths and opportunities^{29,30}

Strengths	Opportunities
<ul style="list-style-type: none"> – A varied culture, an abundance of natural beauty and a multitude of tourist attractions, including the world-renowned heritage site — Taj Mahal, offers a host of tourism destinations in India. Further, India addresses the desires of different categories of tourists — medical, religious, adventure, etc. – Active government support drives the growth of the sector. The Government of India has actively initiated several campaigns to increase India's visibility worldwide, such as 'Incredible India', 'Atithidevo Bhava' and 'Colours of India', indicating active involvement in developing the sector. – India offers 'value for money' as a destination compared to many Asian nations and developed countries; this proposition could help India gain a major advantage while competing for foreign tourists. – A large English-speaking population provides for the labour pool necessary to serve the sector, especially inbound tourists. 	<ul style="list-style-type: none"> – New tourism products, such as rural tourism, film tourism and cruise tourism, are relatively peculiar to India as compared to other countries. Further, the scope for medical, adventure and cultural tourism is also growing. – Enhancing infrastructure to host international festivals and events (sports, music, etc.) also presents an opportunity for attracting tourists from nearby and participating countries; a focus on overall improvement/development of tourist infrastructure may help to further enhance the prospects of this sector. – Recent increase in the FDI limit in the tourism sector is expected to encourage foreign investments, leading to further expansion of the sector. – Visa on arrival and e-visa facilities have been granted to several nations since 2014, which has helped stimulate FTA numbers; tourists availing this facility have spiked in the recent months.

| Cost competitiveness

The Indian tourism sector offers cost-effective, yet quality travel and lodging options across all parts of the country. These are value-for-money factors for international tourists, when compared with developed and other developing countries, when holidaying. This is corroborated in the World Economic Forum's 'The Travel & Tourism Competitiveness Index Ranking 2015' released in May 2015, which shows the Indian tourism sector to be more price competitive than several other countries.

Regions	Price competitiveness
Europe and Caucasus	4.19
South America	4.5
North America and the Caribbean	4.68
Sub-Saharan Africa	4.71
Asia Pacific	4.75
The Middle East and North Africa	5.27
India	5.59
Best performer (globally)	6.62

Source: *The Travel & Tourism Competitiveness Index Ranking 2015, World Economic Forum (May 2015)*

The table above depicts that India is closer to the best score of 6.62 achieved by Iran, and only lags a handful of countries in price competitiveness (Malaysia 5.76, Tunisia 5.61, Gambia 5.9, Yemen 5.91, Indonesia 6.11 and Egypt 6.19). Switzerland is the least price competitive, and hence costliest, with a score of 2.57.³¹

Sources: 29 KPMG in India analysis;

30 *Imagine India - The land of untold stories and unseen destinations – Tourism Vision 2030, KPMG in India and Experience India Society*

31 *The Travel & Tourism Competitiveness Index Ranking 2015, World Economic Forum, May 2015; 2 "Hotel occupancy in India surpassed 60% for the first time in four years," The Economic Times, 23 September, 2015*

Amongst the BRICS too, India scores higher on cost competitiveness (Brazil 4.51, Russia 4.99, China 5.1 and South Africa 4.99).³²

Drivers of the Indian tourism sector's price competitiveness³³

Lower currency exchange rate

The Indian rupee trades at a lower rate than the more widely accepted currencies, such as the U.S. Dollar, the Euro and the Sterling Pound. Tourists transacting in these currencies are able to enjoy more services per unit of currency. When compared with many other countries too (including BRICS countries), the Indian rupee fares badly.

Cheaper manpower

Skilled manpower in the Indian tourism sector is also cheaper compared to many other countries. Tourism being a labour-intensive industry, benefits from the availability of trained yet cheaper manpower.

Cheaper lodging

Budget lodging aggregators are offering stiff competition to branded budget hotels, who are fulfilling supply from the existing hotels falling under the unbranded segment. Price-led competition among hotels have also helped to keep room prices at the minimum. Room prices declined marginally by INR5,510 during 2014–15, over 2013–14 levels.³³

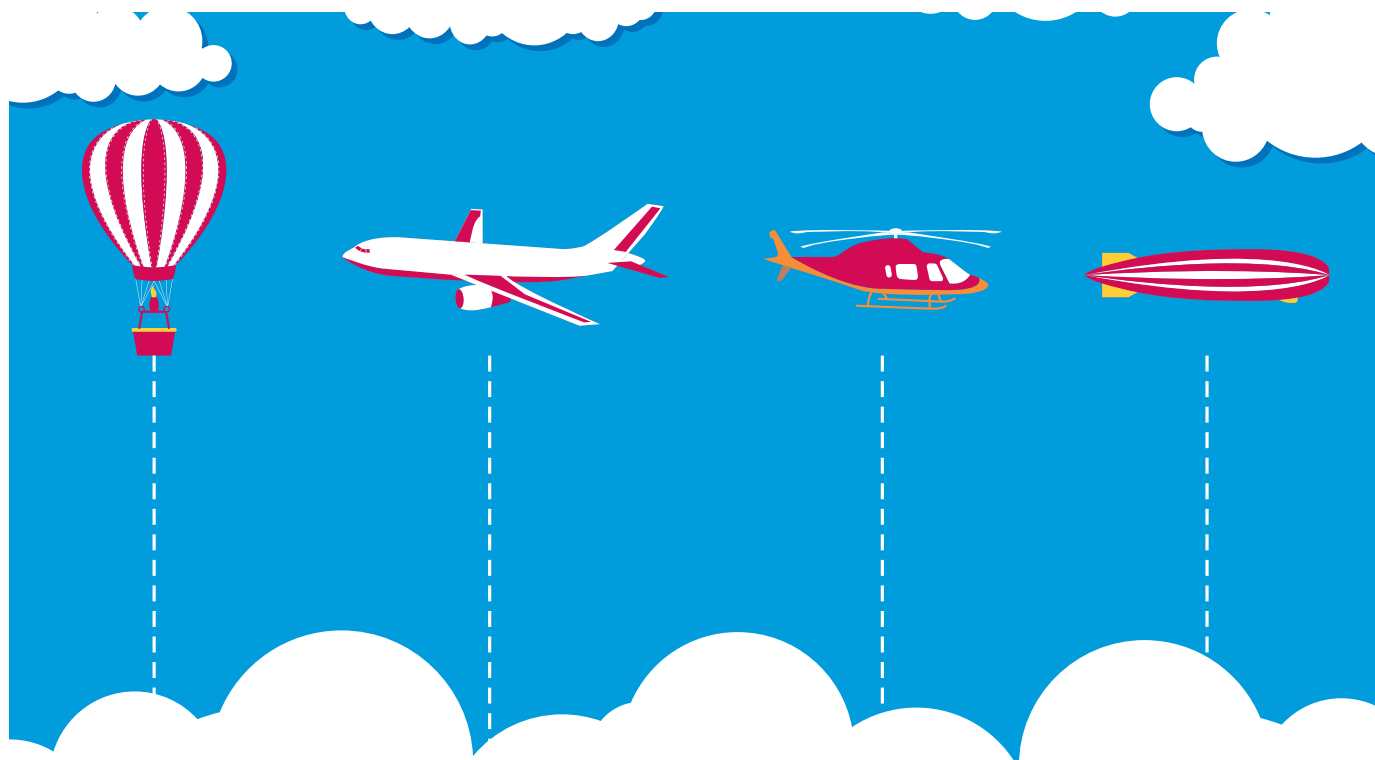
Source: ³² The Travel & Tourism Competitiveness Index Ranking 2015, World Economic Forum, May 2015;

³³ "Hotel occupancy in India surpassed 60% for the first time in four years," The Economic Times, 23 September, 2015

Enhancing tourism exports from India



| Enhancing tourism services exports from India: Assistance to Indian firms^{34,35}



Government-run promotional offices in foreign countries

Trade offices under the Ministry of Commerce could be established in high-potential countries/regions to promote tourism. This is expected to result in a structured and more impactful approach to promotion, thereby increasing the effectiveness. A targeted campaign could also be carried out that focusses on the high-potential countries.

Dedicated export body

A nodal agency for the promotion of tourism services could be created to work on a range of activities to assist Indian firms compete actively abroad. Key activities under the ambit of such an agency could be to drive demand and develop India as a brand.

Skills development

Skills development action plan could be implemented under the PPP model to build human capital necessary to serve additional arrivals of foreign tourists. Under this, efforts could also be channelised to develop soft skills and linguistic capabilities. This is one of the most important aspects that needs to be developed for enhancing foreign tourist visits to India.

Education on global trends

A PPP programme could be established that works toward educating service providers in India on global tourism trends, allowing them to enhance their capabilities. This shall also help in projecting India as a tourist-centric nation, and help attract more foreign tourists

Source: 34 Services Conclave 2014;

35 KPMG in India analysis

Enhancing tourism services exports from India: Approaching international markets^{34,35}

Indian travel and tourism firms could take up steps to reach out to foreign travellers and invite them to India.

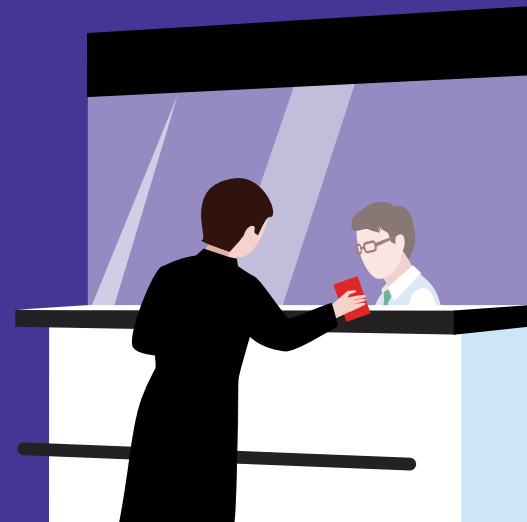
- **Registration with governing and approving bodies in high potential countries:** Indian firms could seek registration with international trade bodies and associations, while approaching international markets. As registered entities, Indian firms can benefit from access to services and support offered by these bodies, and can offer confidence to tourists willing to avail their services.
- **Achieve international quality certifications:** Internationally recognised certificates can act as a reflection of the quality offered by Indian firms, making them more appealing to prospective tourists. This might also encourage tourists to avail services from Indian firms.
- **Participation in international events:** Events and exhibitions are an effective platform to promote tourism services (offered by firms) in other countries. Events held by the government (in various countries) and trade bodies could be leveraged.
- **Promote specialisations aimed at foreign tourists:** Tourism service providers in Indian could actively promote capabilities that are specific to foreign tourists, such as customised tours and arrangements for providing specific cuisines. The presence of such capabilities might help to attract more foreign tourists.

Source: 34 Services Conclave 2014;

35 KPMG in India analysis



Regulatory architecture³⁶



The Indian tourism industry is governed by multiple regulators who work in accordance with relevant legislations to ensure sustainability of the sector.

Accreditations^{36,37}

- NABH accreditation for providers of wellness tourism
- International Air Transport Association (IATA) for travel agencies
- Accreditation Committee set-up by the Ministry of Tourism for adventure sports operators
- Certifications by CE or UIAA for equipment used in adventure tourism.

Regulators³⁶

- Ministry of Tourism
- State governments for tour operators in their respective states
- International Air Transport Association (IATA)
- Indian Mountaineering Foundation.

Federations and associations^{36,37,38}

- The Federation of Hotel and Restaurant Association of India
- Federation of Associations in Indian Tourism & Hospitality
- Indian Association of Tour Operators
- The Travel Agents Federation of India
- Association of Domestic Tour Operators of India
- Travel Agents Association of India
- Adventure Tour Operators Association of India

- Indian Heritage Hotels Association
- Indian Tourists Transport Association
- India Convention Promotion Bureau
- Hotel Association of India (member of Hotel & Restaurant Approval and Classification Committee, Ministry of Tourism)
- Outbound Tour Operators Association of India
- Indian Tour Operators Promotion Council
- Indian Heritage Hotels Association
- India Convention Promotion Bureau
- Adventure Tour Operators Association of India
- Association of Domestic Tour Operators of India.

Relevant acts³⁶

- National Tourism Policy, 2002
- Development of Tourism Act, 1969
- Wild Life (Protection) Act, 1972
- Forest (Conservation) Act, 1980
- Environment (Protection) Act, 1986
- Coastal Regulation Zone Notification, 1991
- Motor Vehicles Act, 1988
- Ancient Monuments & Archaeological Sites and Remains Rules, 1959
- The Consumer Protection Act, 1986
- Various states have passed their own acts and policies for tourism.

Sources: ³⁶ KPMG in India;

³⁷ Annual Report 2014-2015, Ministry of Tourism, GoI;

³⁸ Imagine India - The land of untold stories and unseen destinations – Tourism Vision 2030, KPMG in India and Experience India Society 3 DIPP website, accessed 20 January 2016 http://dipp.nic.in/English/Publications/FDI_Statistics/FDI_Statistics.aspx

I Foreign Direct Investment (FDI)

The tourism and hospitality sector is amongst the top-15 sectors in India to have attracted the highest FDI, between April 2000 and May 2015, the sector attracted approximately USD8.1 billion FDI.³⁹ Policies that are expected to further attract foreign investments have been implemented and might be essential for the continued growth of the sector.

Key FDI policies³⁹

- Allowing 100 per cent FDI under the automatic route in the tourism and hospitality sector, subject to applicable regulations and laws
- Allowing 100 per cent FDI in tourism construction projects, including development of hotels, resorts and recreational facilities
- Allowing 100 per cent FDI in airport expansion projects, provided that FDI for upgrading existing airports require FDI Promotion Board (FIPB) approval beyond 74 per cent
- A five-year tax holiday to companies setting up hotels, resorts and convention centres at specific destinations, subject to the fulfilment of the conditions agreed upon.

Sources: 39 DIPP website, accessed 20 January 2016 http://dipp.nic.in/English/Publications/FDI_Statistics/FDI_Statistics.aspx



Small and medium enterprises



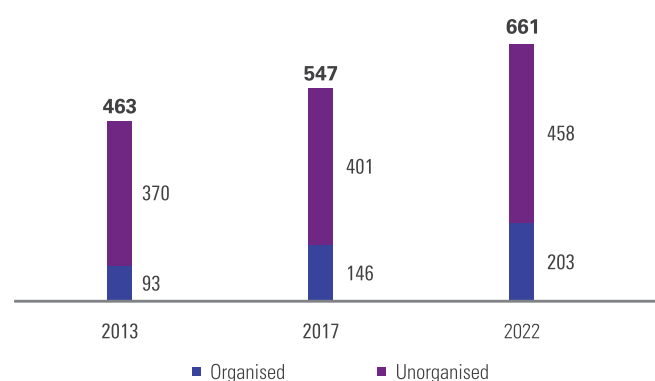
Small and medium enterprises in tourism⁴⁰

Small and Medium Enterprises (SMEs) form the backbone of the tourism sector. They are important to the functioning of the sector, providing a wide range of services across India. The participants in the sector: tour operators, travel agents and transportation service providers, fall under both the organised and unorganised segments. The unorganised segment (comprising of SMEs) dominates due to the absolute number of such participants that operate as proprietorships or as small-scale partnerships.

There has been considerable growth in SMEs in tourism due to rapidly increasing budget hotels, and bus and taxi transport operators over the past decade. Due to the localised nature of tourism in India, small providers have been able to occupy a niche by specialising in specific destinations and service types.

They have been able to carve out a large share of the tourism market by taking advantage of the inability of larger corporations to provide all services, everywhere. Owing to limited entry barriers in this sector, the unorganised segment is expected to continue to hold a majority share in the sector.⁴¹

Estimated workforce in tourism (in '000)

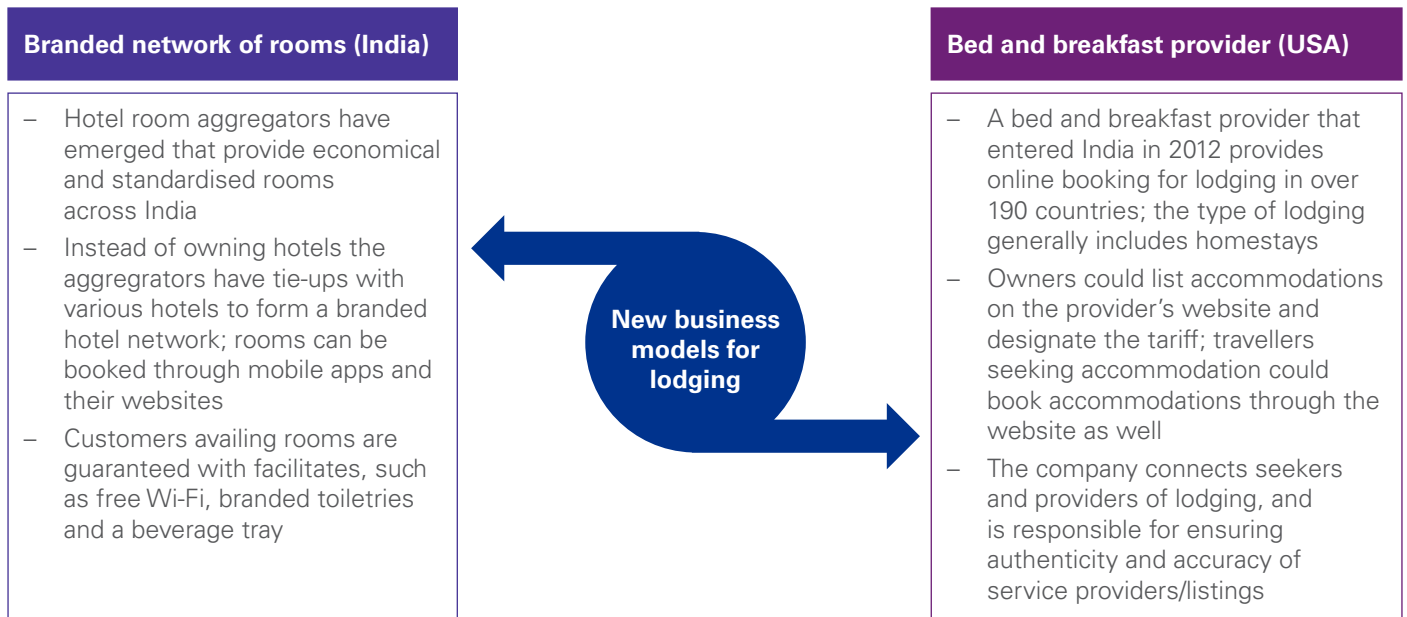


Sources: The National Sample Survey Office; KPMG in India

However, with the increase in foreign participation and online travel portals in the market, SMEs in the sector are expected to witness stiff competition in attracting revenues from foreign tourists and may primarily focus on domestic tourists for sustenance.

Sources: 40 The National Sample Survey Office;

41 "In Focus: Moving Ahead with Resilience: The Indian Services Industry," Yes Bank



| Next steps to drive the Indian tourism sector

	Long-term		
	Medium-term		
	Short-term		
Government	Build digital capability		
Government and industry	Implement focussed governance	Engage in private-public collaboration Develop new tourism products	
Industry	Enhance accessibility through visa facilitation	Enhance infrastructure Innovate in marketing and promotion Develop skill	Adopt global trends in service delivery

| **Develop new tourism products⁴²**

For a long time, India has offered heritage and cultural tourism, and is now offering various new forms of experience to tourists.⁴² There exists ample scope and opportunity to further add and develop new forms of products to cater to tourists with varied tastes and needs.⁴²

New products, such as medical tourism and ecotourism, have gained a strong foothold in India's tourism proposition, which demonstrates the need for new forms of service offerings.⁴² Tourism products that have received attention in the recent past, such as film tourism, election tourism and adventure tourism, need time and effort to be developed into mainstream offerings.⁴²

Products that are directed towards high-potential markets also need a special focus for their growth. For instance, Chinese tourists, which form the largest share of international tourists globally, do not view India as a preferred holiday destination.⁴² Hence, development and promotion of Buddhist circuits could be one of the propositions to attract tourists from China.⁴²

| **Innovate marketing and promotion tools⁴²**

New-age marketing and promotional means could be employed to generate a greater connection and brand recall amongst foreign tourists.⁴² Efficient media management programmes, including the use of a professional public relations agency, to connect stakeholders and educate the market, is also important to build long-lasting reputation of the Indian tourism market.⁴²

To help ensure high satisfaction levels, the alignment of promotional campaigns with market demand (and in turn designing products to suit market needs) could also be undertaken.⁴²

The enhanced visibility of India as a multifaceted tourist destination shall go a long way in grabbing the attention of foreign tourists.⁴²

| **Build digital capability**

With rapidly increasing internet penetration worldwide, it is imperative that a sound digital capability be developed to facilitate all aspects of promotion and service delivery to tourists.⁴³ Along with online marketing and promotions, transactional capabilities — travel arrangements across all modes, payment facilitation for accommodation, food and conveyance — could also be developed.⁴³

| **Implement focussed governance**

A focussed institution could be formed to support and develop the India tourism ecosystem.⁴³ For this, institutions in the U.K. and Singapore could be studied to adopt an effective statutory framework.⁴³

The formation of such an institution is expected to boost the tourism sector by driving a focussed agenda. It shall also help channelise the Ministry of Tourism's focus towards policy guidance.⁴³ Further, this institution shall help to facilitate and regulate the quality of services through a formal framework and regulation mechanism.⁴³

| **Enhance infrastructure**

To serve the growing needs of tourists and meet the standards that are desired globally, both hard (transport and accommodation) and soft (safety, security, cleanliness, etc.) infrastructure could be improved further.⁴³ Adequate rail and air connectivity is lacking in some parts of the country, and so is the inadequate last mile connectivity in several parts of India. Air connectivity to non-metros is low, especially in the North-East region and hilly terrains of the country. Hence, rapidly bringing more cities and towns within the ambit of air connectivity through no-frills airports and greenfield projects is pertinent. Similarly, enhancing the road network and quality to aid tourist inflow to more destinations requires immediate attention. Railways, which is the second-most preferred mode of travel in India for domestic tourists, is not preferred by foreign tourists for transportation.

This could be attributed to poor service standards and concerns about safety and security, all of which could be improved significantly in order to cater to tourists.⁴³

Sources: 42 *Imagine India – The land of untold stories and unseen destinations – Tourism Vision 2030*, KPMG in India and Experience India Society

43 *Imagine India – The land of untold stories and unseen destinations – Tourism Vision 2030*, KPMG in India and Experience India Society;

Soft infrastructure is equally important in improving the overall tourism ecosystem in a country. In the Indian context, the significance of clean facilities, and strong mechanisms to ensure safety and security cannot be more emphasised. The availability of potable drinking water and hygienic food is a basic need for a tourist, along with clean and hygienic sanitary facilities and amenities.⁴³

The use of technology (such as CCTVs) to enhance safety and security has become the norm worldwide and needs widespread deployment across the country. Special measures and departments are required to help ensure safety of foreign tourists, especially women.⁴³

Enhance accessibility through visa facilitation

Through the planned extension of the visa on arrival facility to 180 countries⁴⁴ recently, great strides have been made in making India easily accessible to foreign tourists. Presently, nine out of 12 international airports in the country offer visa on arrival⁴⁵, and steps could be taken to extend the facility to the remaining airports.

Visa on arrival could also be extended to cover ports in an attempt to boost tourism via cruise lines, which has ample scope in India. This consequently also requires the development of new and existing ports.

A visa being one of the most important and initial steps that allows a tourist to make a plan to visit a country, presents the country with the first opportunity to form a favourable image of a destination.⁴³

Develop skills

Skill development is a crucial component in developing India's prominence as a tourist destination. A trained and knowledgeable workforce might greatly enhance service quality, thereby helping to build a more favourable impression on tourists.⁴⁶ Hence, there is a need for increased focus on grooming, on-the-job training, communication skills, courses in foreign languages and standardisation and monitoring of curricula in private institutions.⁴⁶

Concerned stakeholders: the industry, the central government, National Skill Development Corporation (NSDC) and the Sector Skill Council (SSC) — could come together to build and expand the skilling ecosystem in the country.⁴⁶

Engage in private–public collaboration

There exists a greater scope for collaboration between the industry and the government to develop the tourism ecosystem in the country — from creating destinations, delivering services and developing skills. Industry expertise, when combined with government resources, could enable a more progressive environment for the sector to flourish.

A novel way of collaborating might be the maintenance and upkeep of historical monuments. Restoration and maintenance of these monuments is typically under the purview of the government. The private sector could be engaged to sponsor some of the historical monuments for branding purposes to help ensure their upkeep.

This model of collaboration can be especially effective in development and maintenance of museums across the country. Private sector-run museums are popular in many countries.

Sources: ⁴³ *Imagine India – The land of untold stories and unseen destinations – Tourism Vision 2030, KPMG in India and Experience India Society*;

⁴⁴ Ministry of External Affairs;

⁴⁵ E-visa India

⁴⁶ *Imagine India – The land of untold stories and unseen destinations – Tourism Vision 2030, KPMG in India and Experience India Society*

Accounting and Audit Service



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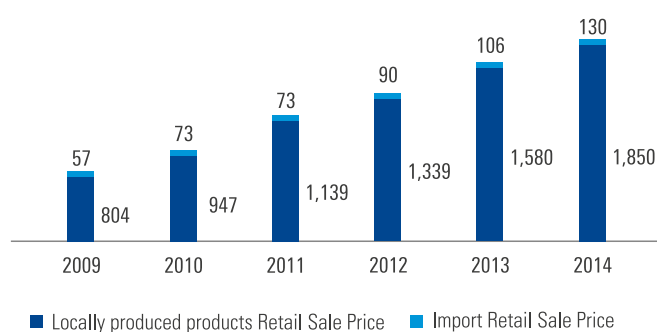
Overview



| Service overview¹

The accounting and auditing market comprises of services pertaining to evaluation of the reliability and credibility of financial information. It also includes the systems and processes responsible for recording and summarising the same information. The global audit market is dominated by a few major audit firms. However, a majority of the firms in the sector operate from single offices, servicing their local and multinational customers. The concentration of the accounting and auditing market, and its possible effects on both its fees and quality, has resulted in a change of regulatory frameworks and introduction of new financial reporting standards. Organisations worldwide have become significantly cautious about appointing an auditor, and regularly review such appointments.

Auditing and accounting market demand — India 2009–14 (approximately USD million)



Source: Industrial Capsule: Accounting and Auditing In India, October 2015
Euromonitor International

| Size and growth

The combined global revenue of major audit firms in 2014, having an overall market share of 66 per cent, grew by 5.8 per cent, touching USD120² billion, as compared to the combined revenues of USD113.7 billion in 2013.³

India's accounting and auditing sector revenue increased by 15 to 17 per cent during the period 2013–14.³ This growth was on account of increasing Foreign Direct Investment (FDI) and growing business activities in the country. The new regulations including Implementation of the Companies Act 2013 and convergence of the Indian Accounting Standards (Ind AS) with the International Financial Reporting Standards (IFRS) have positively impacted the performance of the industry.

Until April 2015, the Institute of Chartered Accountants of India (ICAI) had 234,000 members, including fellows and associates, and 830,000 students enrolled in the Chartered Accountancy course.⁴

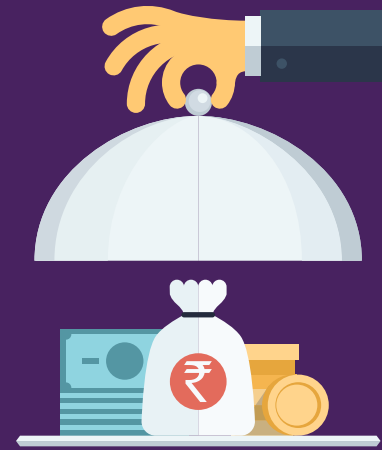
Source: 1 "Fundamentals of Accounting and Auditing," The Institute of Company Secretaries of India, February 2012

2 "The 2014 Big Four Firms Performance Analysis," Big 4, January 2015,

3 Industrial Capsule: Accounting and Auditing In India, October 2015, Euromonitor International, accessed via ISI Emerging Markets accessed on 12 January 2016

4 "The Institute of Chartered Accountants of India" website, accessed on 10 October 2015

Demand



Global demand for audit services^{5, 6, 7}

In the last few decades, rapid industrialisation has been witnessed around the globe, encompassing several business sectors. The global demand for specialised professional services, such as accounting and auditing, has increased significantly because of increased international trade activities, and regularly changing global accounting and auditing standards. Multinationals having diverse businesses spread across various geographies, require their auditors to have a global reach and consistent auditing expertise around the world. This has led to the emergence of large global accounting and auditing networks. Moreover, in order to maintain one's reputation and avoid potential litigation risks, the demand for expertise in international accounting and auditing standards, strong quality control and professional personnel has increased. These factors are the main driving forces behind the growing demand for these services. Owing to the substantial base of low-cost talent pool and technology-driven outsourcing capabilities, emerging economies such as China and India, are expected to cater to the growing global demand of accounting and auditing services, contributing significantly to the sector in the near future.

Demand for audit services in India^{8, 9, 10}

India has emerged as a preferred destination for business in the auditing sector. It is witnessing a significant rise in multinational footprints and a growing start-up ecosystem. The sector has created wide-ranging opportunities for foreign as well as domestic players. Strong growth of the Indian economy has resulted in more business deals, not only in local markets, but also internationally. This has led to the rise in demand for accounting and auditing services in India.

The adoption of the new Indian Accounting Standards (Ind AS), converged with the International Financial Reporting Standards (IFRS) and the Institute of Chartered Accountants of India (ICAI), has stimulated the demand for the Indian chartered accountant professionals in the West Asian countries, Australia and Singapore.

Source: 5 "Global demand for Indian Chartered Accountants: ICAI chief," *The Economic Times*, 2 December 2014,

6 "Indian CAs in good demand in West Asia, Australia," *The Hindu Business Line*, 24 October 2013, KPMG in India analysis

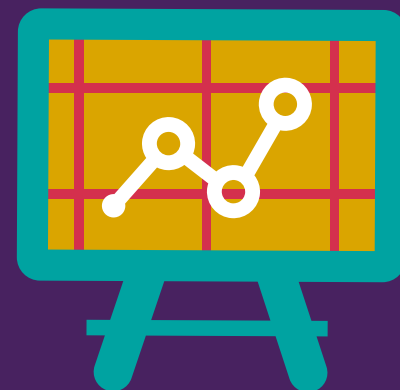
7 "China and India – the Most Promising Markets for Accountants and Auditors," 19 July 2014, Euromonitor International

8 *Industrial Capsule: Accounting And Auditing in India*, October 2015, Euromonitor International, accessed via ISI Emerging Markets as on 12 January 2016

9 "M&A buzz in auditing as new Companies Act makes smaller firms takeover targets," *The Economic Times*, 16 December 2014

10 "India to adopt global financial standards from April 2015," *The Economic Times*, 24 February 2014, KPMG in India analysis

Sector overview



Growth in demand for auditing and accounting services in India is also attributed to the cross-border merger and acquisition activities, which witnessed an increase of 73.1 per cent in 2015.¹¹ This is expected to increase the demand for transfer pricing services. In addition, India has emerged as one of the most preferred markets for foreign investments. FDI intensity as a share of GDP grew from 1.3 per cent in 2012 to 1.7 per cent in 2014,¹² thus increasing the demand for these services in the country.

- (a) Companies Act⁸, 2013
- (b) Ind AS-IFRS

Implementation of the Companies Act and convergence of the Indian Accounting Standards (Ind AS) with the International Financial Reporting Standards (IFRS) are expected to bring about a shift in the Indian accounting and audit industry, creating demand and helping smaller players penetrate the market.

- (a) Mergers
- (b) Acquisitions

Merger and acquisition activities in the Indian accounting and auditing industry have intensified. Major audit firms in India are actively looking at buyouts and mergers across Tier II and Tier III cities.

| Language skill requirement:

English is one of the most commonly spoken languages and is accepted internationally. A large share of the Indian population communicates in English, and hence Indian auditing firms could cater to the high demands from the Western world to help ensure their presence globally.

India could also provide its expertise to countries in Latin America, East Asia and Africa, which lack skills and manpower required for such specialised services.

Learning foreign languages such as Mandarin, Spanish, Arabic, Portuguese and French shall enable professionals in India to reach out to Latin American and European countries. Korean, Malay, Japanese, Vietnamese and Thai linguistic capabilities can also empower the Indian workforce to understand local documents to penetrate further into other geographies.

Source: 11 "India Inc M&A activity shrinks to 2-year low, Thomson Reuters report shows," *The Financial Express*, accessed as on 6 January 2016

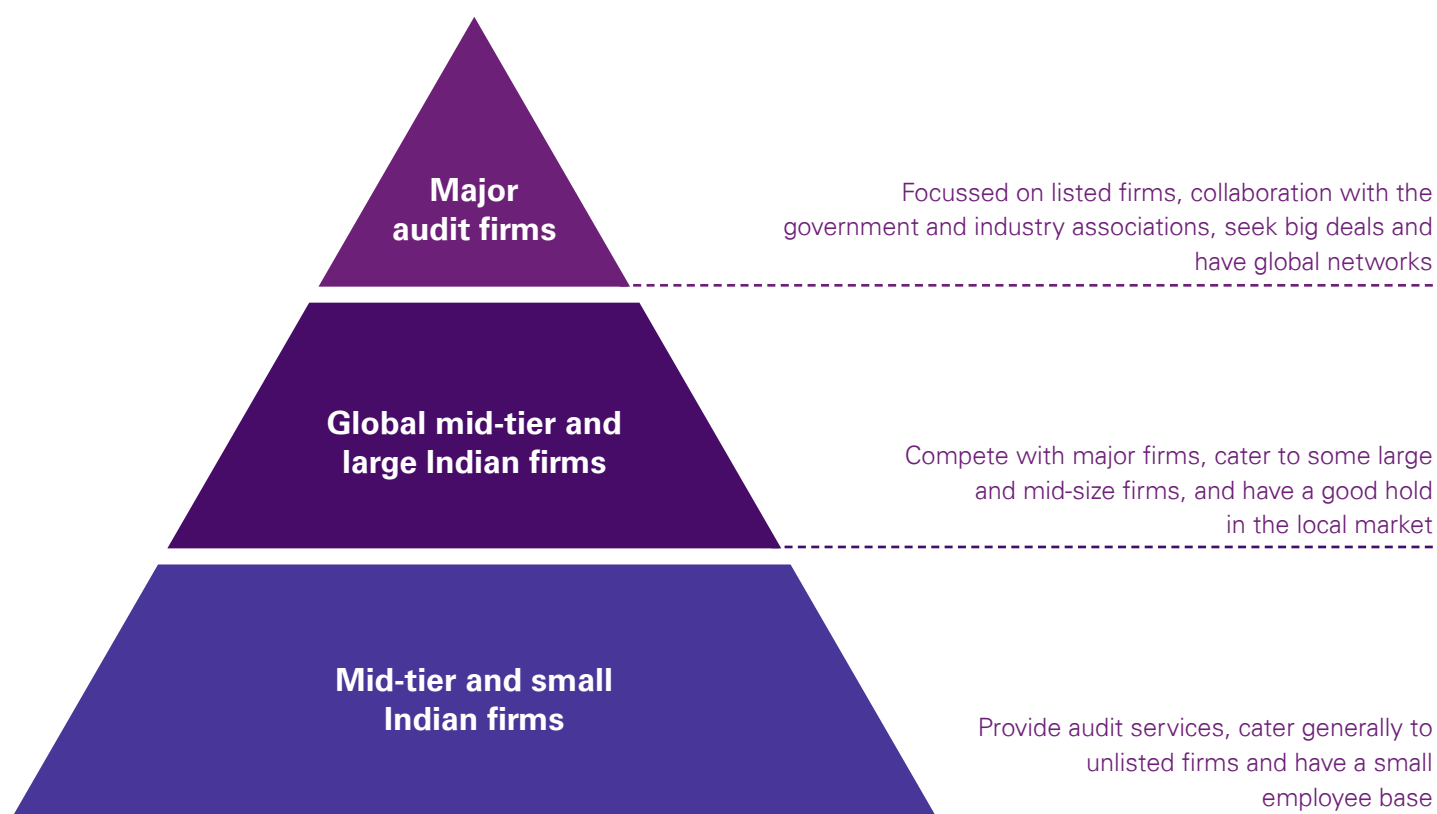
12 *Industrial Capsule: Accounting And Auditing in India, October 2015, Euromonitor International*, accessed via ISI Emerging Markets as on 12 January 2016

India's profile in the audit and accounting sector¹³

The Indian accounting and audit market is significantly concentrated. In 2012, there were over 82,000 entities in the sector in the country, an increase of 24 per cent since 2007. Five leading companies generated approximately 52 per cent of revenue in 2010.

Accounting and auditing firms in India are likely to grow, provided a change in the number of rule that companies need to abide by, such as the Companies Act, Goods and Services Tax (GST), audit rotation, changes in accounting standards, Place Of Effective Management (POEM), Base Erosion and Profit Shifting (BEPS), etc.

Audit landscape in India^{14, 15}



Source: 13 "Accounting and Auditing in India ISIC 7412," October 2013, Euromonitor International, accessed via ISI Emerging Markets as on 15 October 2015

14 CA Knowledge website, accessed as on 10 October 2015

15 India-EU Trade & Investment Agreement: Prospects for the Accountancy Sector, ICRIER, October 2008, KPMG in India analysis

India's profile



The accounting and auditing sector in India is significantly fragmented. In 2012, there were over 82,000 entities in the sector, including large, medium-size and small firms and individual auditors¹⁶. The sector generally comprises of small and medium-sized firms. Generally, small firms have two to three Chartered Accountants (CAs) with a few article clerks whereas medium-sized firms have about five to six CAs.¹⁷ These firms are spread across the nation, but

a lot of them are headquartered in metro and Tier I cities. The National Capital Region (NCR), Kolkata, Mumbai, Pune, Hyderabad, Bengaluru and Chennai are some of the most favoured regions/clusters of accountancy firms due to the presence of several global as well as domestic clients.¹⁸

India's profile: Clusters of accounting and auditing services



Cluster advantages¹⁵:

- **Good infrastructure:** Well-developed infrastructure for power, banking, communication network, office spaces, etc. are easily available in metro cities for accounting and auditing firms to set up their offices.
- **Connectivity and accessibility:** Close proximity to international and domestic airports, national highways and railways. Further, business opportunities due to the presence of corporate/head offices and accessibility to client sites are primary benefits for accounting and auditing firms to offer their services.
- **Rich talent pool:** The availability of higher education institutes and significant career opportunities in the urban areas have resulted in the migration of population from rural areas to metro and Tier I cities. Such firms can also find a large pool of talented and skilled professionals easily in these clusters.



Source : 16 "Accounting and Auditing in India ISIC 7412," October 2013, Euromonitor International, accessed via ISI Emerging Markets as on 15 October 2015

17 India-EU Trade & Investment Agreement: Prospects for the Accountancy Sector, ICRIER, October 2008, KPMG in India analysis

18 KPMG in India analysis

India's profile: Mode-wise potential¹⁹

Accounting and auditing services are categorised as professional services. The General Agreement of Trade in

Services (GATS) underlines four modes of delivery of such services. As India has established its strength in outsourcing, some modes are likely to prove to be more beneficial for accounting and auditing services exports.

Modes of accounting and auditing exports



Mode 2 and **4** are widely used channels for accounting and audit exports.

Mode 2: Due to an ease in the regulatory environment in terms of foreign investment, FDI in the services sector in India has increased to 46 per cent to USD3.2 billion in FY15.²⁰ Foreign companies invest in India to take advantage of their relatively lower wages and special investment privileges, such as tax exemptions. As a

result, foreign firms prefer workforce, which could be at a lower cost, and utilise the accounting and auditing services provided by Indian companies.

Mode 4: Accounting and auditing experts are on a high demand globally. There is a significant base of qualified and certified accounting professionals in India. These professionals visit a foreign country on a temporary basis, depending upon the assignments, to offer their services.²¹

Source: 19 Services Export Promotion Council website, accessed on 10 October 2015

20 "FDI inflows in services sector increased by 46 per cent in 2014-15: Department of Industrial Policy and Promotion data," *The Economic Times*, 15 June 2015

21 "Indian CAs in good demand in West Asia, Australia," *The Hindu Business Line*, 24 October 2013

| India's profile: Challenges and recommendations

Challenges in exporting accounting and auditing services from India²²

International trade challenges

- Restrictions on international payments create an obstacle to export services
- Restrictions on the mobility of audit professionals prohibit companies from exploiting global opportunities
- Barriers to the transfer of technology and information systems prevent IT systems calibration
- Incentives offered and restrictions imposed by other nations on service imports create monopoly

Sector-specific challenges

- Several nations require audit and accountancy professionals to be citizens and residents of the home nation
- Differing professional certification requirements create barriers for the entry of Indian audit professionals
- Significant differences among accounting practices across nations leads to differing accounting norms and lack of standardisation in accounting practices

Reforms required in the Indian accounting and auditing sector^{23, 24, 25}

- Relaxation in allowing FDI in accounting and auditing services is expected to provide greater exposure to the Indian firms and boost their potential to export services
- Easing of the restriction of '20 companies per auditor in a year' rule for an audit firm that might allow auditors to provide services to more than 20 clients in a year. Reforms in this regulation shall boost MSMEs in the accounting and auditing sector, as they get a major portion of their work from unlisted companies
- Amending the Chartered Accountants Act, 1949 to permit multinational firms to conduct audit activities in India, without the need for collaboration with domestic associates

Source : 22 "Promoting exports in accountancy sector," Services Export Promotion Council report 2014, accessed on 10 October 2015, KPMG in India analysis

23 "PwC gets Supreme Court notice on charges of violating Fema, FDI rules," Business Standard, 7 December 2013

24 "Govt. not to change '20 companies per auditor' rule," Business Standard, 17 December 2014

25 "Balanced view needed on allowing foreign auditors: Moily," Business Standard, 01 July 2012

Case study: An Indian chartered accountancy firm

- An Indian accountancy firm²⁶ is one of the leading CA firms in India.
- Founded in 1952, it is based in New Delhi. The firm has a current staff strength of 83, which includes 12 CAs and 10 partners.
- It withdrew its membership from DTTI in November 1995, due to the complexities arising from mergers in India, and is currently an independent entity.
- The firm offers its services across a broad gamut of service lines – audit, management consulting, corporate tax, personal tax planning, inward investment, information technology and back office operations.
- The firm specialises in offering services to firms based outside India that are aiming to set up operations within the country.



Diversified service offerings

An Indian accountancy firm offers a wide-range of services to its clients apart from audit and accountancy, including consultancy, back office operations and information technology

Global exposure

Offering services to overseas clients has provided the company a good exposure in terms of global leading practices in various fields of the sector

Niche expertise

The firm specialises in providing services to companies wanting to set up their operations in India. This has enabled it to develop expertise in identifying and pitching specific services to relevant clients.

Source: 26 "Khanna and Annadhanam" company website, accessed on 9 October 2015; KPMG in India analysis

27 KPMG in India analysis

I India's profile: Strategies to promote growth

Evolution of strategies to promote accounting and auditing services		
Past ^{28, 29, 30}	Present ³¹	Future
<ul style="list-style-type: none"> – Export Promotion Council: To encourage export of services and tap into new global opportunities, the Ministry of Commerce and Industry, Government of India (GoI), has established the Service Export Promotion Council (SEPC) in 2006. – Market Development Assistance (MDA) scheme: To offer financial support to members of SEPC, GoI brought in the MDA scheme in 2006. – Market Access Initiative (MAI) scheme: The GoI underlined the MAI scheme to provide assistance for specific markets/ products to boost exports by accessing new markets or increasing their share in the existing markets. 	<ul style="list-style-type: none"> – Foreign Trade Policy (2015–20): The Services Exports from India Scheme (SEIS) has been introduced by replacing the Served From India Scheme (SFIS). – SEIS provides credit rewards of 5 per cent on the net foreign exchange earnings of accounting, auditing and bookkeeping service providers who are providing services from India. 	<ul style="list-style-type: none"> – Increased tie-ups to overcome the weakness of small size of domestic accountancy firms – By leveraging the outsourcing capabilities of India, such as setting up back offices for U.S. firms and training the Indian service providers on U.S. financial reporting guidelines, accounting and auditing services are expected to grow. – Relaxation of limitations related to licensing and accreditation, via negotiations with other countries, to empower Indian firms to offer their services globally, is expected.

Source : 28 Services Export Promotion Council website, accessed on 10 October 2015

29 Federation of Indian Exports Organizations website, accessed on 10 October 2015

30 Ministry of Commerce and Industry website," accessed on 10 October 2015

31 Highlights of the foreign trade policy 2015-2020," Government of India, Department of Commerce, Ministry of Commerce and Industry, January 2015 KPMG in India analysis

Competition



Competition

Indian accounting and auditing firms are small in size, which limits their growth internationally. Developed economies, such as the U.S., the U.K., France, the Netherlands and Gulf nations, are home to several auditing firms having a global reach. The largest accounting firms are based out of the Americas and Europe, with their networks well-established around the world, including India.³² Many global audit firms in India enjoy reputational advantage with companies, which is one of the factors allowing them to charge a significantly higher fee compared to other mid and small sized audit firms.³³ Indian audit firms need to concentrate on building good relations with their clients and establish their brand name in the market.

Large firms take advantage of the economies of scale, and focus on expanding industry-specific knowledge and technical expertise. These networks have also invested extensively to develop the required tools and skills to meet the market's demands for high quality services in the last few decades, by offering accounting and auditing services to large and complex public companies. These large network firms compete aggressively in terms of industry expertise, reputation, quality and cost.³⁴ Considering this scenario, Indian accounting and auditing firms could work on these strategies to cope with future challenges and build up their expertise fast enough to exploit global opportunities

Competition to India: Leading practices of competitors³⁵

Leading practices adopted by competitors are as under:

- The European Commission (EC) supports fair competition amongst auditors, and regularly takes effective steps to reduce the concentration of the accounting and audit market, which is dominated by large firms, by splitting their audit and consulting businesses.³⁶
- The EC also works toward limiting the amount of non-audit work a company could take up for its audit client.³⁷
- The U.K., Germany, Italy, the Netherlands, Slovak Republic, Spain, France and Belgium follow a Multi-Disciplinary Partnerships (MDPs) concept. This enables auditors to offer corporate compliance, audit and consulting to their clients under one roof. It helps accounting and auditing firms with branding, cross-border growth, economies of scale and develop specialisation.³⁸
- Global accounting and auditing firms also offer value-added services and insurance against potential disasters and reputational risk, which make them preferable audit partners in the long-term.³⁹

Source:

³² "China and India – the Most Promising Markets for Accountants and Auditors," 19 July 2014, Euromonitor International, KPMG in India analysis

³³ "Why do Indian firms pay higher fees to Big Four auditors?, Livemint, 12 October 2015

³⁴ "Current Trends in the Audit Industry," April 2015, International Forum of Independent Audit Regulators (IFIAR), KPMG in India analysis

³⁵ Developments in the global accountancy sector, CIMA sector report, May 2011

³⁶ "Competition Commission raps Big Four accountants," BBC News, 22 February 2013

³⁷ "Should The Big Four Dominate Global Auditing?," GAA Accounting, 24 August 2012

³⁸ "Companies can access all professional services from one source soon," The Economic Times, 25 March 2015

³⁹ Competition and choice in the UK audit market, Department of Trade and Industry and Financial Reporting Council, April 2006 KPMG in India analysis

Strengths and Opportunities



| Sector strengths and opportunities⁴⁰

Strengths	Opportunities
<ul style="list-style-type: none"> – The Institute of Chartered Accountants of India (ICAI) currently has 234,000 members, along with 830,000 students enrolled in the Chartered Accountancy course. This determines continuous supply of qualified manpower capable of fulfilling the requirements of the audit and accounting sector. – In addition to the core accounting domain, chartered accountants in India are also trained in niche segments, such as valuation, forensic accounting, derivatives, forex and treasury management and enterprise risk management. This empowers them to be adept at handling complex business situations. 	<ul style="list-style-type: none"> – The Institute of Chartered Accountants of India (ICAI) currently has 234,000 members, along with 830,000 students enrolled in the Chartered Accountancy course. This determines continuous supply of qualified manpower capable of fulfilling the requirements of the audit and accounting sector. – In addition to the core accounting domain, chartered accountants in India are also trained in niche segments, such as valuation, forensic accounting, derivatives, forex and treasury management and enterprise risk management. This empowers them to be adept at handling complex business situations.

Source : 40 "The Institute of Chartered Accountants of India" website, accessed on 9 October 2015; "Promoting exports in accountancy sector," Services Export Promotion Council report 2014, accessed on 9 October 2015; KPMG in India analysis

I Skills required

Accounting and audit firms based in India, offer services to clients within and outside the country. They hire chartered accountants accredited by the Institute of Chartered Accountants of India (ICAI). Education in schools until the twelfth standard or equivalent from a recognised board of education is required in order to register with the ICAI as a candidate. The following skills are expected from a qualified chartered accountant.

Technical skills	<ul style="list-style-type: none"> – In-depth knowledge of financial statements – Knowledge of the applicable accounting standards, including the Indian Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standards (IFRS) – Detailed knowledge of various taxation and mercantile laws applicable in the country – Data management and synthesis – Proficiency in various computer software and applications used in modern day accounting
Soft skills	<ul style="list-style-type: none"> – Adaptability towards understanding relevant changes in accounting standards, made periodically, as well as inculcating those changes during audits – Ability to communicate with clients during an audit, utilising effective language skills and strong thought articulation – Leadership qualities required to head a team of auditors and accountants needed to establish accuracy and materiality of business records – Professionals employed within the audit and tax sector are expected to maintain independence and objectivity so as to not be influenced by external pressures – Ability to thoroughly analyse a company's financial records, ascertain accuracy and provide qualified opinions wherever valid

Regulatory architecture



I Regulatory architecture^{41, 42, 43, 44}

The Institute of Chartered Accountants of India (ICAI) is the sole certification authority for the auditing profession in India. ICAI is currently the second largest accounting body in the world. It lays down accounting standards and norms towards regulation of the audit profession.

Accreditations

- ICAI awards the title of a 'Chartered Accountant' to candidates upon successfully clearing relevant examinations as well as undergoing a mandatory articleship/training period. Only a registered member of the ICAI is expected to be appointed as the auditor of an Indian company.

Regulators

- Institute of Chartered Accountants of India (ICAI)
- Institute of Costs and Work Accountants of India (ICWAI)
- Institute of Cost Accountants of India (ICoAI)
- Comptroller and Auditor General of India (CAG)
- Ministry of Commerce and Industry
- Ministry of Corporate Affairs
- Service Export Promotion Council (SEPC)

Relevant Acts:

- The Chartered Accountants Act, 1949
- The Partnership Act, 1932
- The Companies Act, 1956
- The Cost and Works Accounts Act, 1959
- The Finance Act, 1994
- The Chartered Accountants (Amendment) Act, 2006
- The Limited Liability Partnership Act, 2008
- The Companies Act, 2013

Source : 41 "IMCI" website, accessed on 28 September 2015,

42 "Strategy for India's Services Sector: Broad Contours," Ministry of Finance, Government of India, December 2007

43 "Policy for India's Services Sector," Ministry of Finance, Government of India, March 2010

44 "The Institute of Chartered Accountants of India," website accessed on 30 March 2016

Enterprises

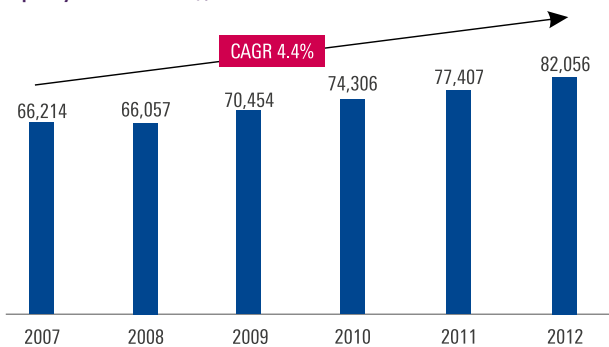


Small and medium enterprises in the audit sector⁴⁵

The audit sector in India represents a significantly skewed picture with micro, small and medium enterprises (MSME) comprising over 99 per cent of the firms present in India, as of 2012. However, global accounting firms

have an even share of the total industry revenues. Despite consistent growth in the number of firms, the share of revenues earned by MSMEs in the sector has remained relatively static. This represents a potential skill gap within Indian MSMEs, preventing them from offering a wide-range of services, required by public companies or large multinational clients.

No. of accounting and auditing MSMEs (employment size), 2007–12⁴⁶



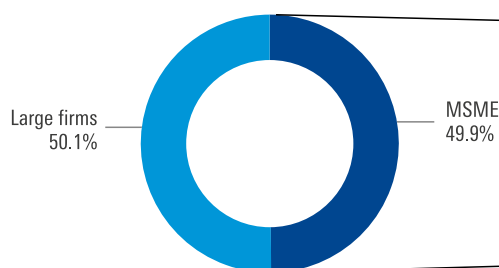
Note: Companies with less than 500 employees are considered as MSME

Source: "Accounting and auditing in India report," Euromonitor International, October 2013

The voluntary convergence of IFRS with Ind AS beginning **April 2016** is expected to create greater opportunities for MSMEs in this sector, on account of standardisation of global accounting norms. This shall enable MSMEs to compete with large accounting firms, by virtue of a more level-playing field and standardised skill sets and expertise, necessary to cater to big ticket clients, thereby enhancing revenue prospects as well as making it easier to scale up their operations periodically.

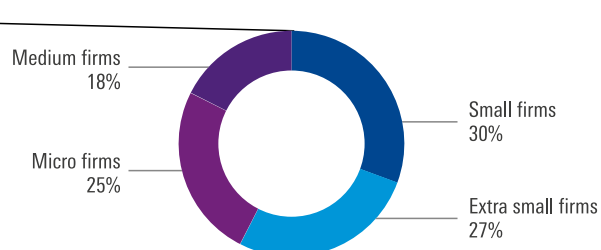
Production by firm size 2012

100 per cent = USD1,224 million



Production segmentation, MSME firms 2012

100 per cent = USD610 million



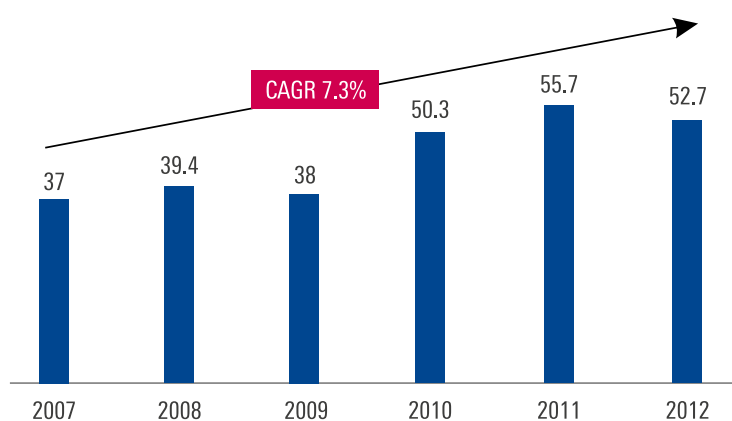
Note: Companies with less than 500 employees are considered as MSME Note: Average exchange rate (2012) = 53.45, Oanda.com

Source: "Accounting and Auditing in India," Euromonitor International, October 2013

Accounting and audit services exports



Exports (audit and accountancy) India, 2007–12 (USD million)



Source: "Accounting and auditing in India," Euromonitor international, October 2013

Enhancing accounting and audit services exports from India: Recommendations⁴⁶

Nodal advisory agency	Promoting ICAI as an advisory destination for businesses and corporate law firms planning to enter India
Qualification recognition	The Government of India could encourage reciprocal qualification recognition by promoting the Chartered Accountancy qualification that might lead to greater market access for Indian audit professionals
Export to Least Developed Countries (LDC)	Presenting ICAI as an entity which could help the development of the accountancy profession in Least Developed Countries (LDC) such as Afghanistan, Myanmar, Angola, etc. A nascent audit and accountancy sector in these nations provides immense service export opportunities to India
Niche segment services	Promoting ICAI in other countries for training and skill development in niche segments of interest, such as enterprise risk management, valuation and forex management
Structural barriers	Addressing structural barriers, such as mobility restrictions, which restrict the free flow of qualified Indian professionals around the globe for the purpose of engaging in professional activities
Foreign delegations	Outbound corporate and academic delegations from India could have members of ICAI, capable of playing an advocacy role, assisting in the promotion of Indian accountancy and audit services to other nations

Source : 46 "Promoting exports in accountancy sector," Services Export Promotion Council report 2014, accessed on 10 October 2015, KPMG in India analysis
10 October 2015, KPMG in India analysis



Architectural and engineering services

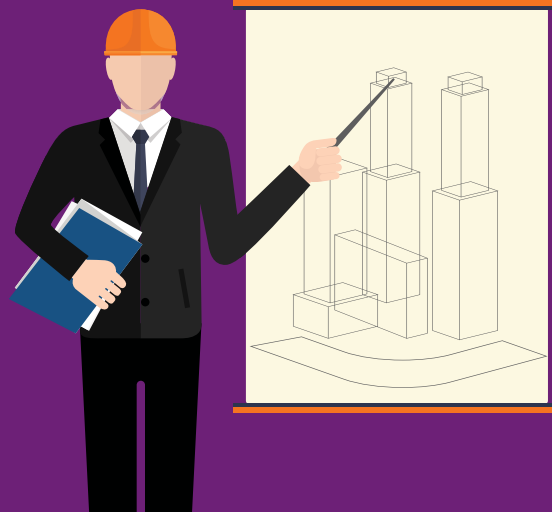


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Sector overview



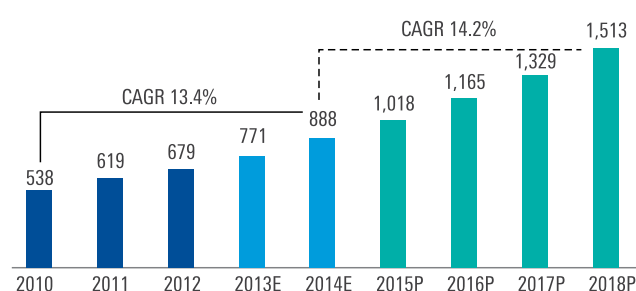
The production of architectural and engineering services in India was estimated at USD888 million in 2014, and is expected to grow at a CAGR of 14.2 per cent to reach USD1,513 million by 2018.¹

The Government of India is investing in infrastructure development to enhance the pool of skilled and educated professionals as well as undertaking policy measures, such as 100 per cent FDI permitted in the real estate sector. These steps are key factors that drive the growth story of architectural and engineering services in India. B2B is the largest customer group in the market representing 99 per cent of its total size.² Some of the most significant categories of B2B purchases are public administration, defence and social security (14 per cent of total B2B purchases) followed by road passenger and freight transport (9 per cent).²

The market is fragmented with more than 50,000 entities serving the sector, with the top five companies accounting for only 5 per cent of the total output.

The sector is expected to grow at 14 per cent per annum, due to expanding urbanisation and increasing spends by public on housing projects, roads, ports, water supply, rail transport, airport development and other infrastructure projects, which provide architectural and engineering firms with substantial demand for services.³

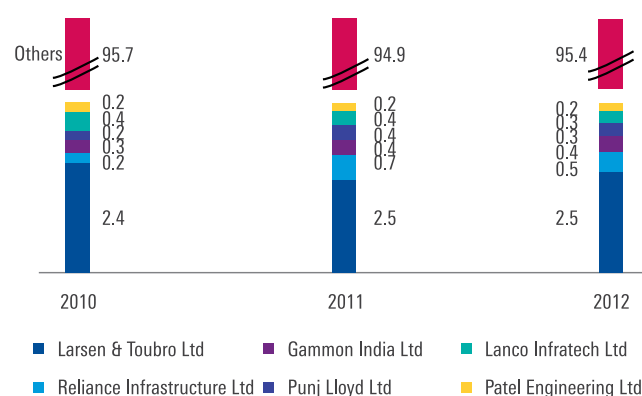
Market size (in USD million)



Note: USD1 = INR62.3 (as of 31 March 2015)

Source: "Architectural and Engineering Services in India report," Euromonitor International, October 2013

Market share by company (%)



Source: "Architectural and Engineering Services in India report," Euromonitor International, October 2013

Source: 1 "Architectural and Engineering Services in India," Euromonitor report, October 2013, KPMG in India's analysis, 2015.

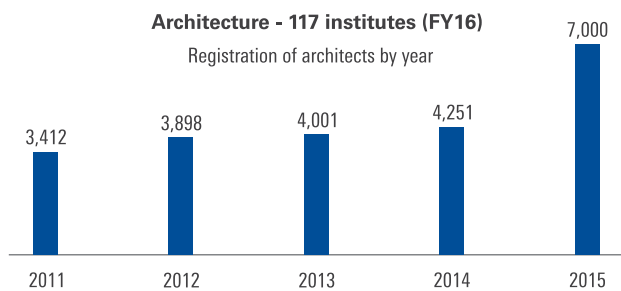
2 "Architectural and Engineering Services in India," Euromonitor report, October 2013.

3 KPMG in India's analysis, 2015.

| Sector overview: Manpower availability

Architecture⁴

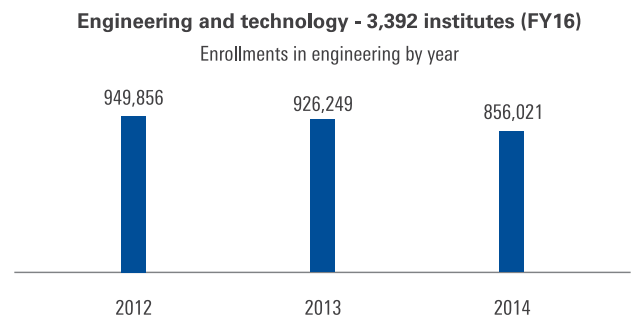
As of 2015, there were approximately 73,000 architects practicing in India. About 30 per cent of these are registered in five cities – Mumbai, Delhi/NCR, Pune, Bengaluru and Chennai.⁴



Engineering and technology⁵

India has approximately 3,400 registered institutes that impart education to undergraduates, with about 900,000 students enrolling each year. In engineering, 24 per cent of enrollments take place in computer science.⁵

The number of enrollments in engineering in India are second only to China, which had 1.27 million enrollments in engineering in 2013.⁶



Source: 4 Yearwise registration of architects, Council of Architects, <http://www.coa.gov.in/index1.php?lang=1&level=1&sublinkid=37&lid=50>, accessed 10 January 2016.

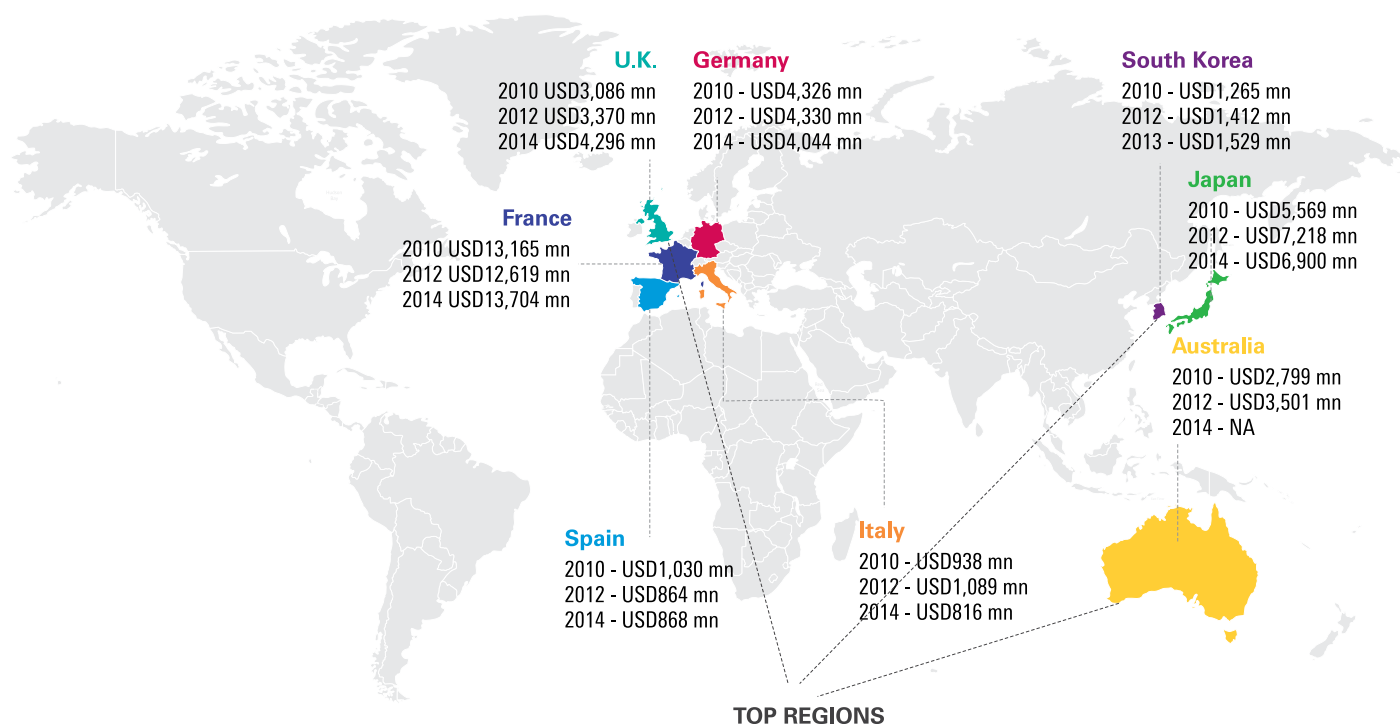
5 AICTE data, <http://www.aicte-india.org/dashboard/pages/dashboard.php>, accessed 10 January 2016.

6 China statistical yearbook 2014, <http://www.stats.gov.cn/tjsj/ndsj/2014/indexeh.htm>, accessed 10 January 2016.

Demand for architectural and engineering services⁷



Potential markets for architectural and engineering services imports (in USD million)



Apart from the U.S. and China, Western Europe, South Korea, Japan and Australia have the potential to become key markets for export of Indian architecture and engineering firms. In addition, the resurgence of economies in Africa provide significant scope to export services.

Demand for architectural and engineering services: Language capabilities required⁸

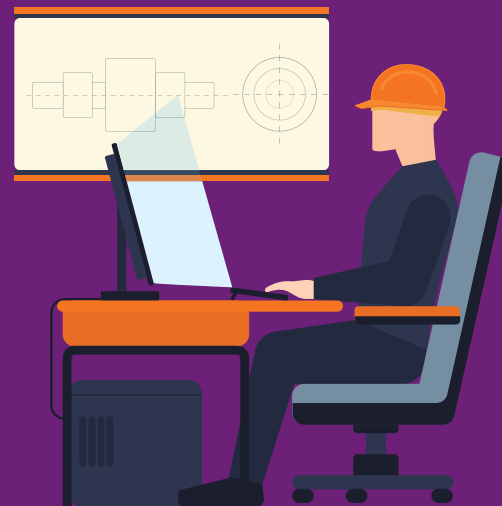
India has the advantage of having a large base of workforce fluent in English, which can be helpful for export of these services to English-speaking destinations in Europe and Australia. This is also expected to be helpful when expanding the service base to countries in Africa and other parts of the world, where English is the primary language for business.

In addition, language capabilities could be built up in Spanish and French, which are widely spoken globally. Korean and Japanese could also be considered as important languages, as they offer significant potential to leverage other markets in the East and South-east Asian countries, where Indian firms could penetrate significantly.



Source: 8 KPMG in India's analysis, 2016.

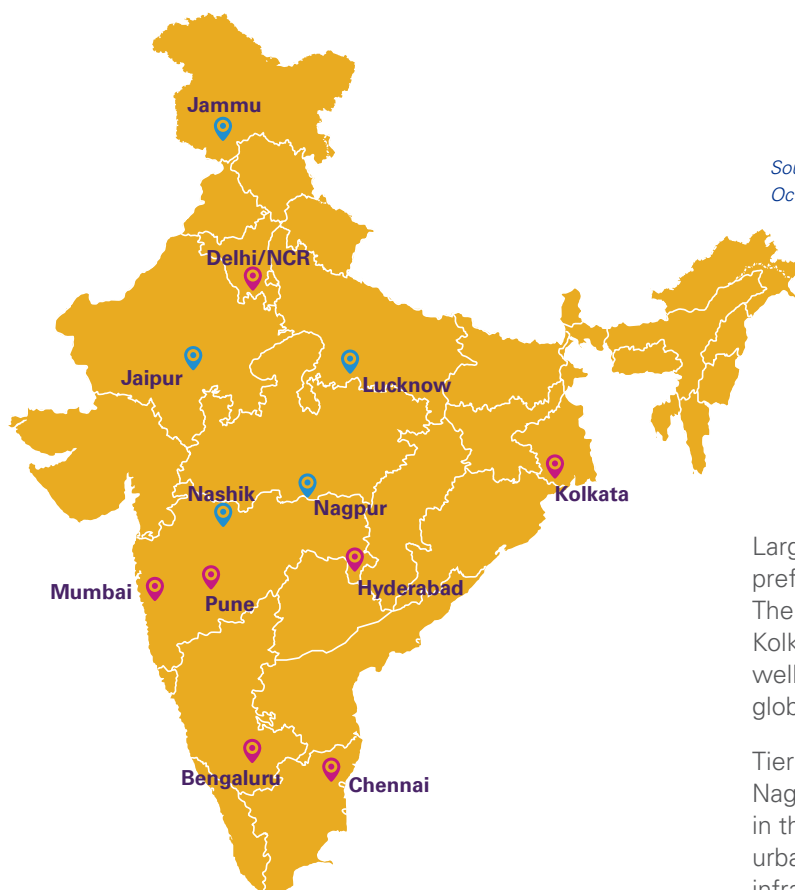
India's profile in the sector



I India's profile in the sector⁹

India's exports in architectural and engineering services were estimated at USD6.9 million in 2014. Exports grew at a rapid pace during 2009-14.

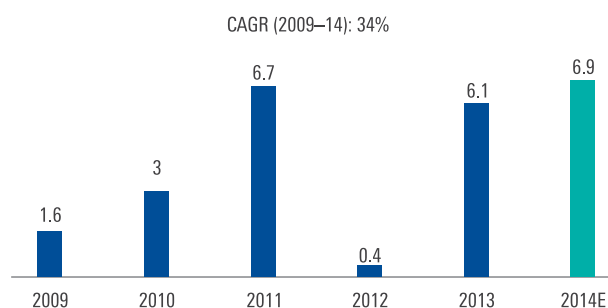
Clusters of architectural and engineering services¹⁰



Metros and Tier I cities

Tier II and III cities

Exports of architectural and engineering services (in USD million)



Source: "Architectural and Engineering Services in India," Euromonitor report, October 2013; KPMG in India's analysis, 2016.

Large urban centres (metros and tier I cities) in India are preferred by architectural and engineering services firms. The National Capital Region, Mumbai, Pune, Bengaluru, Kolkata and Chennai are huge cities/clusters that are well placed to deliver these services to domestic and global clients.¹⁰

Tier II and III cities, such as Lucknow, Jaipur, Nashik, Nagpur and Jammu, have also witnessed significant growth in the demand for these services driven by a growth in urban development as well as many government-led infrastructure projects.¹⁰

The Indian Government's 'Smart Cities' initiative is also expected to significantly expand the domestic market for architectural and engineering services beyond tier I cities.¹⁰

Source: 9"Architectural and Engineering Services in India," Euromonitor report, October 2013.

10KPMG in India's analysis, 2016.

I Mode-wise potential¹¹

Architectural and engineering services are an aggregation of architectural consulting, geologic and geodetic surveying, engineering and project management and other technical consultancy, catering to a wide ambit of sub-services. All the four modes of service exports could be employed to cater to foreign clients. However, some modes might prove to be more effective for architectural and engineering service exports.

All four modes of services exports are applicable to both architectural and engineering services firms. However, due to various regulatory challenges in architecture, such as the requirement of architects to be registered in many countries, as well as the regulatory requirements governing these firms in India, not many architecture firms have expanded their services beyond South Asia.

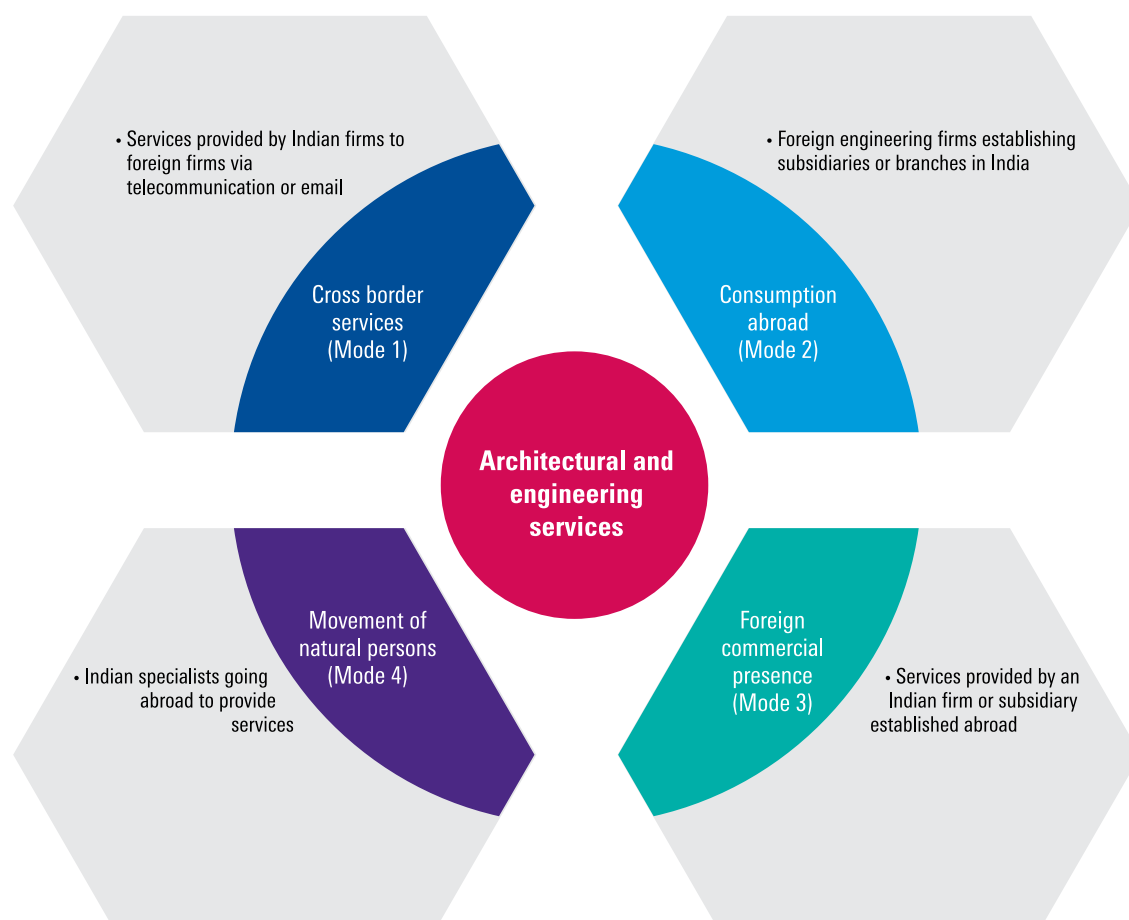
Mode 1: This is a popular mode of service export for engineering firms, where the Indian firm collaborates or is subcontracted, cost arbitrage being the primary concern.

Mode 2: There are no FDI restrictions in both architecture and engineering services sectors. Projects funded by overseas development agencies typically require international experience for consultants, which has contributed to the presence of foreign engineering firms in the country. In addition, as in Mode 1, foreign firms have set up their subsidiaries to take advantage of the cost arbitrage and the availability of qualified manpower.

Mode 3: Many Indian engineering firms have their physical presence in other countries in South Asia, especially Nepal and Bangladesh, as well as in West Asia and North Africa. Firms in this sector are also looking at South-East Asia and Central Asia as potential markets, given the establishment of many markets and the significant number of Asian Development Bank and World Bank funding for infrastructure projects in these regions.

Mode 4: The movement of Indian architecture and engineering professionals as consultants and project managers among other roles is common, due to the availability of skilled personnel as well as lower manpower costs.

Modes of architectural and engineering services exports



Source: "World Trade Organization website," <https://www.wto.org/>, accessed 10 February 2016.

Source: 11KPMG in India's analysis, 2016.

International requirements for registration

As India seeks recognition of RTO registration in foreign countries, it is imperative that the requirement of registration in India is made consistent with international leading practices. This shall improve the prospects of entering into Mutual Recognition Agreements (MRA) with professional bodies in countries of export interest. In this regard, the following issues need to be addressed:

Citizenship or residency: It was noted that while the opening statement of Section 25 of the Architects Act requires only residency, para (c) limits registration to only citizens of India. This anomaly under Section 25 needs to be corrected and the requirement should only be residency for practice. Action – the COA and the MHRD.

Introduction of the Professional Practice Examination (PPE): Several developed countries require that an individual passes a PPE to make him/her eligible for registration. The Architects Act, 1972 does not require such an exam for registration. The PPE may be introduced for registration. This shall also help to improve the prospects of entering into MRAs. It needs to be examined whether introduction of PPE requires legislative amendments or can be introduced with executive orders. This is for the action of COA and MHRD.

Language: Foreign language modules may be offered by architectural education institutions, especially in languages of our major export destinations and for countries which insist on knowledge of a particular language as a requirement for registration. This for the action of COA.

Provision related to 'landscape architect' or 'naval architect', town planner etc. – It was noted that as per the provisions of the Architects Act, practice of the profession of an architect by a person designated as a landscape architect or naval architect, is not subject to registration (Section 37(1)(a)). It needs to be examined whether there is merit in bringing these fields into the regulatory fold as well as in line with global leading practices and whether this provision is hampering the conclusion of MRAs.

Engagement of foreign architects as 'architects' or as a consultant/designer under the Architects Act, 1972:

As per the letter and spirit of the Architects Act, foreign architects can be engaged as architects in India only if they are registered with the COA or through MRAs between the COA and the home country regulator of the foreign architect. Otherwise, foreign architects can be engaged only as consultants or as designers with the prior permission of the central government (Section 37(1)(b)).

However, many foreign architects and foreign firms are working in India in contravention of the provisions of the Architects Act.¹² Hence, when foreign architects are not registered with the COA or there is no MRA, foreign architects should only be engaged as consultants or as designers, with the prior permission of the central government, as per Section 37(1)(b) of the Architects Act. This shall also serve the objective to enhance the capabilities of Indian architects as was successfully implemented for the design of some the major airports in India by the Airport Authority of India.

Accordingly, necessary guidelines may be issued to various departments of the central and state governments as well as local bodies to engage foreign architects only as consultants/designers under Section 37. It is also important that guidelines circulated by the Department of Expenditure be suitably amended to be consistent with the provisions of the Architects Act.

I Procurement policies

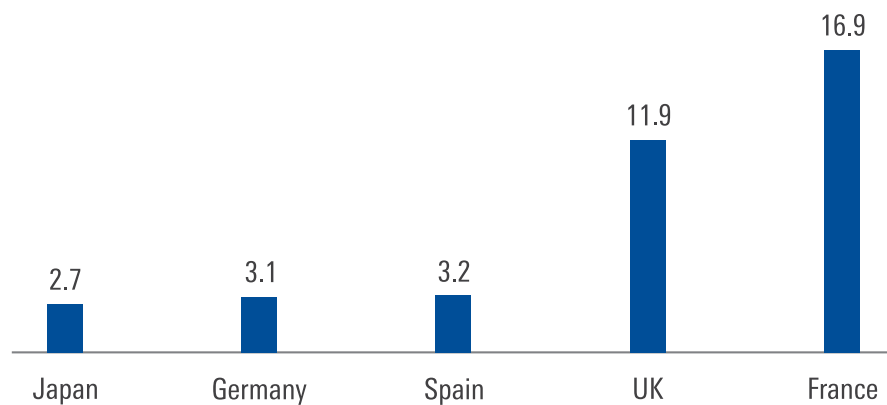
It is understood that CVC guidelines for civil and electrical contractors are being applied for engagement of architects by different government agencies, as there are no specific CVC guidelines for engagement of architects. This sometimes results in high benchmarking of experience and financial requirements which may not be necessary for the practice of a creative profession as in architecture. These guidelines also tilt the balance in favour of foreign architects.

Appropriate guidelines need to be prepared for engaging architects, which are consistent with the provisions of the Architects Act and CVC's requirements of fairness, transparency and competitiveness.

I Competition

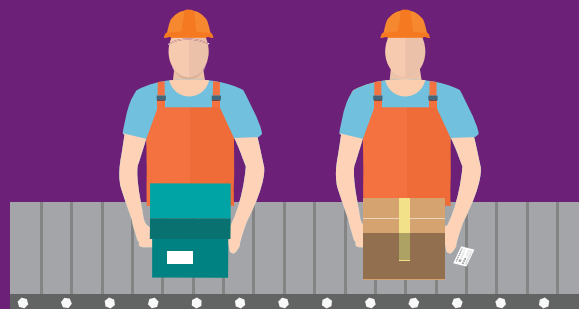
Apart from the U.S., Western Europe is a major exporter of architectural and engineering services. France, in particular, is home to several large architectural and engineering multinational firms.

Leading exporters of architectural and engineering services in 2014, excluding the U.S. and China (in USD billion)



Source: Euromonitor database, accessed 15 November 2015

Sector strengths and opportunities¹³



Strengths ¹³	Opportunities
<ul style="list-style-type: none"> – Low-cost services due to the lower-cost structure. – Large English-speaking resource pool trained in architecture and engineering, ensuring adequate supply of intellectual capital for long-term growth. – India caters to the entire spectrum of services under architectural and engineering services, making it a one-stop-shop for these services. 	<ul style="list-style-type: none"> – Positive regulatory and market environment due to a large number of government-supported infrastructure and engineering projects, as well as policy support via 'Make in India' initiative. – To become a hub for design and R&D for global companies (through KPO/offshoring of operations) for both architectural and engineering services, given the low cost and experienced workforce. – To become a hub for providing architectural and engineering services to other emerging economies in the region, such as Myanmar, given the proximity to these countries, and help build these sectors through educational exchange and other programmes.

Skills required¹⁴

Human capital is the single-largest resource required for driving the architectural and engineering services domain. Professional and academic skills are mandatory for effective execution of service delivery.

Technical and domain skills	<p>Architecture and engineering services, being inherently of a technical nature and requiring a degree of specialisation, requires formal training. The basic entry requirements for employment in these sectors is a diploma; however, many companies have an undergraduate degree as one of the basic criteria for selection of a candidate.</p> <p>In addition, knowledge of software specific to the sector, such as GIS software in urban planning, CAD software for architecture and engineering, as well as project management, data processing and presentation software, have become key requirements.</p>
Certifications	<p>Apart from formal degrees and diplomas, professional certifications are an important requirement for professionals and companies. Globally recognised certifications, such as PMP for project managers, LEED for green building projects and ISO certifications for process management, are helpful to enable global mobility and allow benchmarking with peers globally.</p>

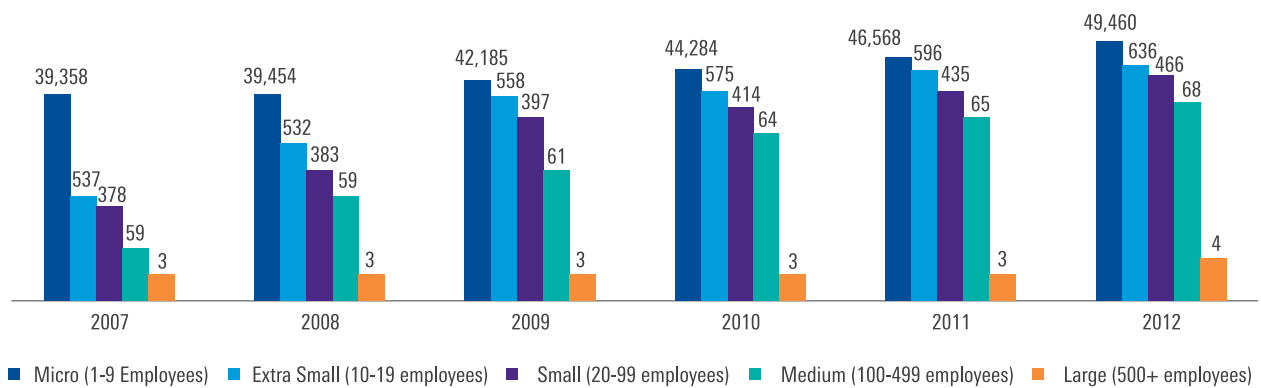
Source: 13 KPMG in India Analysis

14 KPMG in India's analysis, 2016.

I Small and Medium Enterprises (SMEs) in the sector¹⁴

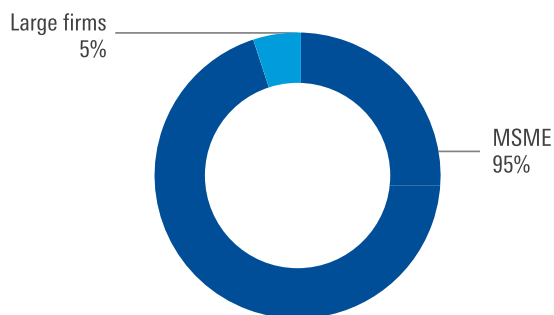
In 2012, the market was served by 50,634 entities with several of them being small enterprises, employing largely nine people (approximately 98 per cent share of the total businesses in 2012) and about 55 per cent of total output that was also served by small enterprises during the same year.

Number of companies by employment size (2007–12)



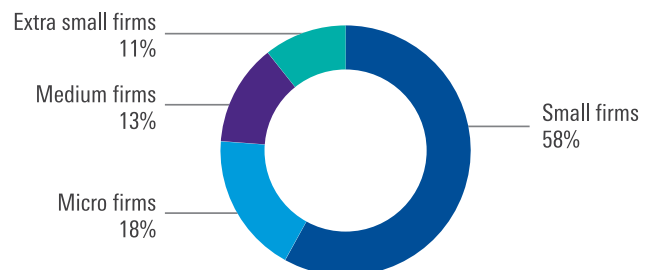
Source: "Architectural and Engineering Services in India report," Euromonitor International, October 2013

Share of revenues by firm size 2012



Revenue segmentation, MSME firms 2012

100 per cent = USD607 million



Source: "Architectural and Engineering Services in India report," Euromonitor International, October 2013

Regulatory architecture¹⁵



Acts

- The Architects Act, 1972

Regulatory bodies

- University Grants Commission (UGC)
- All India Council for Technical Education (AICTE)
- Council of Architecture

Institutes

- A majority of Indian state and central universities have engineering and architecture courses
- Indian Institutes of Technology
- School of Planning and Architecture

Industry bodies and associations

- Project Exports Promotion Council of India (PEPC) (set-up by the Government of India)
- Engineering Export Promotion Council (EEPC) (sponsored by the Ministry of Commerce)
- The Institution of Engineers (India)
- Engineering Council of India (ECI)
- Consulting Engineers Association of India (CEAI)
- Association of Consulting Civil Engineers (India) (ACCE)

- Indian Society of Mechanical Engineers (ISME)
- Indian Association of Structural Engineers (IASE)
- Institute of Town Planners, India (ITP)
- Institute of Urban Transport (India) (IUT)
- The Indian Institute of Architects (IIA)

Practice the profession of an 'architect' in India¹⁶

The Architects Act does not define the functions of an architect. Also, 'practice of profession of an architect' is not defined. In addition, various other provisions such as the National Building Code 2005, Building Bye Laws of States and Development Authorities and Municipalities prescribe varying qualifications and competencies for preparation and signing of building plans for statutory approvals. The nodal ministries concerned may look into this issue to bring in clarity as to who can practice the profession of an architect in India. However, any definition that may be developed needs to take into account internationally recognised classifications (like the classifications brought out by the United Nations Statistical Division) as used in the WTO.

Practice by a natural person and/or a juridical person¹⁵

As in the case of several developed countries, in India as well architectural services can be rendered only by natural persons and not by juridical persons (legal entities like companies). However, it was noted that permission to private/public limited companies to render architectural services has become an alternative to registration of architects. This anomaly needs to be addressed.

Source: ¹⁵ Council of Architecture website, coa.gov.in, accessed 28 October, 2015; "Authorities and Associations," IBEF, <http://www.ibef.org/economy/directory/regulatory-authorities-associations-and-councils>, accessed 11 January 2016; KPMG in India's analysis, 2016;

¹⁶ Ministry of Commerce, Government of India

Evolution of strategies to promote the architecture and engineering sector¹⁷

Short-term	Medium-term	Long-term
<ul style="list-style-type: none"> – Participation in international events Events and exhibitions are an effective platform to develop leads and networks in India and other countries. Regular presence in these events might allow firms to present themselves as a suitable source for services. Events held by the government (in various countries) and trade bodies could also be leveraged – Registration with governing and approving bodies in countries with high demand potential Indian firms could seek registration as approved vendors to render their services to clients in respective countries. As a registered service provider, it might be easier to approach prospective clients. As registered entities, Indian firms could benefit by accessing services and support offered by these bodies. – An important issue in this regard is to prepare the grounds for entering into Mutual Recognition Agreements (MRAs) with statutory bodies of countries where there is potential for export of architectural services in the future. For this purpose, professional capabilities of Indian architects need to be enhanced to a higher level. At the same time, there is a need for a predictable domestic regulatory regime for strengthening India's negotiating position. It was also informed that several of India's current exports are to the Middle East countries where architecture is not a regulated profession.¹⁸ 	<ul style="list-style-type: none"> – Government-run promotional offices in foreign countries Trade offices under the Ministry of Commerce could be established in high-potential countries/regions to promote the services offered by Indian firms. This is expected to result in a structured and more impactful approach to promotion, thus increasing their effectiveness. – These offices could also act as liaison centres between prospective clients in foreign countries and Indian firms. – Social Security Agreements (SSAs) Bilateral social security agreements may be required to promote the movement of persons under Mode 4. – Free Trade Agreements (FTAs) By developing bilateral and multilateral trade agreements, it may be easier to promote architectural and engineering services exports from India. In addition, FTAs might also help in avoiding dual taxation. – Misuse of business and tourist visa for employment by foreign architects; Violation of the employment visa guidelines relating to the minimum salary limit of USD25,000 per annum; release of payment to foreign architects operating in India without a prior approval of the central government or payment as consultants. These issues need to be resolved.¹⁹ 	<ul style="list-style-type: none"> – Amending the Architects Act to limit the liability of firms Indian architecture firms are not allowed to form Limited Liability Partnerships (LLPs) or private companies under the present Architects Act. This is a major challenge for the growth of architecture firms as the liability for architecture firms is not limited, which restricts the interest of investors. Since architecture is typically a 'one-time' service, lack of investment restricts the expansion of firms in this sector, which in turn impacts the compensation offered to employees. Pay scales in architecture are among the lowest in the professional services sectors. The lack of interest in the sector has been seen in the declining cut-off percentages and rising vacancy rates for seats in premier institutes, such as the School of Planning and Architecture (SPA).²⁰ – Dedicated export body A nodal agency for the promotion of architectural and engineering services could also be created to undertake a range of activities to assist Indian firms to actively compete abroad. The agency could assist in structuring export promotion activities, thus increasing their effectiveness. This agency could further act as a link between Indian firms and prospective clients overseas.

Source : 17 KPMG in India Analysis;

18 "Ministry of Commerce, Government of India";

19 "Ministry of Commerce, Government of India"

20 Interviews with industry experts

The legal services sector



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Overview



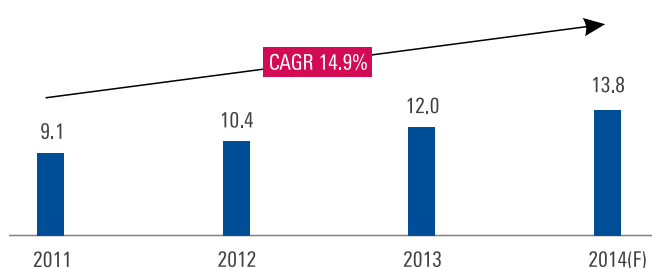
The legal services market encompasses of myriad services such as advisory, representation, documentation and procedures across diverse areas of law, including corporate, criminal, real estate and labour.

The Indian legal services market expanded during 2007-12, at a growth rate of 16 per cent, to reach a value of USD6.8 billion in 2012. The market is expected to grow at a CAGR of 14.9 per cent between 2015 and 2018, and could witness regulatory changes simultaneously, due to the central government's intention of liberalising the sector.¹

Owing to the expertise of professionals in domains such as arbitration, competition law, environmental law, international trade law, outbound foreign direct investment and restructuring and insolvency, Indian legal firms have performed well.¹

These firms generally have a low employee strength. As of 2012, there were 291,680 law firms in India, out of which 97 per cent of the firms had an employee strength in the range of one to nine.¹

Turnover (USD billion)



Source: "Legal Services in India: ISIC 7411," Euromonitor Report, October 2013

| New developments

Hub for commercial arbitration

The central government is striving to make India a hub for international commercial arbitration, as it has made both the Arbitration and Conciliation (Amendment) Bill 2015 and The Commercial Courts, Commercial Division and Commercial Appellate Division of High Courts Bill 2015 into acts²

Foreign interests

The foreign law firms based out of Australia and the U.K., have expressed their interest to enter the Indian market, especially for advisory, arbitration and mediation services³

Liberalisation

The Indian Government is considering to open up the legal services sector to foreign firms, in consultation with the Bar Council of India (BCI)⁴

Commercial courts

The Law Commission of India has proposed to establish specialized commercial courts to reduce the time taken to resolve litigations⁵

Source: 2"Making India an international commercial arbitration hub," Live Mint, 5 October 2015, <http://www.livemint.com/Opinion/TQMqvWD9Agxb0n7voHpLL/Making-India-an-international-commercial-arbitration-hub.html>;

3"Not so global law firms: lawyers want to lift India lock-out," Australian Financial Review, 10 September 2015, <http://www.afr.com/business/legal/not-so-global-law-firms-lawyers-want-to-lift-india-lockout-20150909-gjif23>;

4"Centre seeks views on allowing foreign law firms," Live Law, 26 June 2015, <http://www.livelaw.in/centre-seeks-views-from-bci-on-allowing-foreign-law-firms/>;

5"Law commission suggests creation of specialized commercial courts," Live Mint, 30 January 2015, <http://www.livemint.com/Politics/7MAo7it7vIKL1dJgxcxk2H/Law-commission-suggests-creation-of-specialized-commercial-c.html>

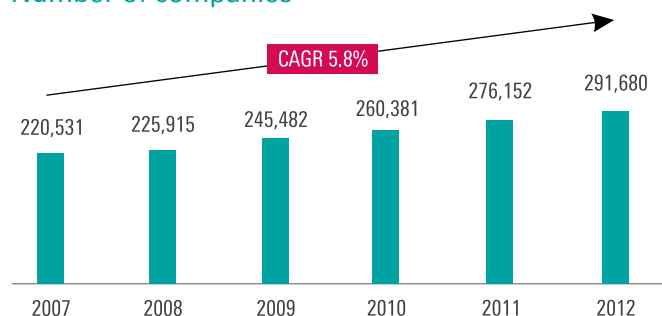
India's profile



India's profile in the sector

India has 600,000 legal professionals in the world, the second-highest after the U.S. Many of these professionals are employed in small firms, across 500 legal practices.⁶

Number of companies



Source: "Legal Services in India: ISIC 7411," Euromonitor Report, October 2013

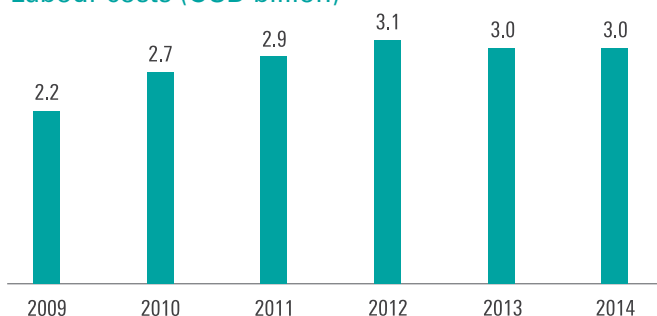
In the legal services industry, labour and business costs are the major constituents of operational costs, with labour costs contributing approximately two-thirds of the total operational costs.

Global Competitiveness Report 2013-14

According to the World Economic Forum's (WEF) global competitiveness report 2013-14, India ranked 40, 62 and 48 with respect to judicial independence, efficiency of the legal framework in settling disputes and efficiency of the legal framework in challenging regulations, respectively. India improved its rankings by three and four places in 2013-14, as compared to 2012-13.⁷

During 2007–12, the Indian legal services market was on an expansion mode, as the number of employees increased by 12 per cent and the profit margins increased from 44 per cent in 2007 to 48 per cent in 2012. Also, the turnover increased 100 per cent in 2012, compared to its value in 2007.⁶

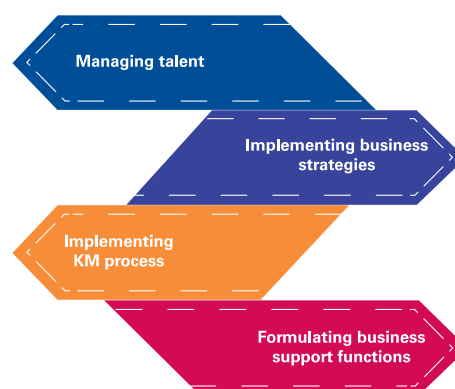
Labour costs (USD billion)



Source: "Legal Services in India: ISIC 7411," Euromonitor Report, October 2013

There has also been a recent trend observed in the sector where, an increasing number of employees have left established firms and have started their own ventures to gain exposure and pursue their entrepreneurial interests.⁶

Challenges faced by Indian legal firms



Source: 6 "LEGAL SERVICES IN INDIA: ISIC 7411," Euro monitor Report, October 2013, Euro monitor database, accessed on 9 October 2015;

7 "The global Competitiveness Report 2013-14," World Economic Forum, accessed on 9 October 2015, http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2013-14.pdf

India's profile in the sector: Challenges faced by Indian legal professionals

- Law firms are prohibited from indulging in any form of advertising in India, which restricts them from building their brand⁸
- Indian advocates are prohibited from charging a fee or have a profit sharing agreement with any other entity. Further, advocates are restricted to increase their earning potential, as they cannot offer services such as accounting and tax management⁸
- Indian lawyers are required to surrender their practice certificate to the State Bar Council, if they wish to enter into an employment contract with a foreign law firm⁸
- A significant number of lawyers in India practice law as individuals, without being associated with a firm, which proves to be a hindrance, as they do not have access to financial assistance⁸
- Law school graduates often receive little or no remuneration during the initial years of their career⁸
- Legal professionals are required to buy-in their stake for a partnership position, and this occasionally results in their gradual exit from firms to initiate their own ventures⁸
- The Legal Process Outsourcing (LPO) industry in India is expected to face hurdles, as the U.S. government is planning to decrease the work being outsourced to other countries and increase job opportunities for the U.S. citizens⁸
- Law school graduates do not receive adequate practical training during their tenure, and consequently, require constant guidance from senior lawyers during the initial years of their career⁸

Suggested reforms

- Regulations pertaining to the sector could be strengthened, especially if foreign firms are expected to get permission to enter India
- A sustainable ecosystem, consisting of institutions, infrastructure and arbitrators needs to be fostered, for supporting commercial arbitration
- The LLP format for advocates could be operationalised
- The scope of activities to be undertaken by foreign lawyers or legal consultants and Indian nationals, could be defined clearly
- Student exchange programmes between Indian and foreign universities could be promoted, to help students develop a holistic understanding of the profession and its various challenges

Source: KPMG in India analysis

Liberalisation reforms

The Indian Government is keen to liberalise the legal sector to attract more capital, create job opportunities and increase the export of legal services. The legal services industry is facing significant restrictions in areas such as advertisement of services, entry into related business areas and practicing in foreign companies.⁹ Besides, foreign firms are allowed to enter India only as per a reciprocity agreement and are prohibited from practicing Indian law.¹⁰ These regulatory compliances have stifled the expansion of this industry.

Currently, the government is considering to allow the entry of foreign firms in India in a phased manner:¹¹

- The first phase is expected to impact certain domestic regulations and allow international arbitration and mediation services in foreign and international law
- The second phase shall entail reforms in non-litigious and non-representational services in the Indian law.

Growth strategies

Adopting innovative structures via consolidation and mergers, to be in sync with global firms

Indian firms need to build their expertise in niche areas of the practice

Law professionals could strive to gain experience in crossborder transactions

Companies could focus on retaining talent and developing standards for on-the-job training

Source: KPMG in India analysis

Reciprocal Agreement: Obligations assumed and imposed by two parties as mutual and conditional upon the other party assuming same obligations.

Source: 8“GenNext lawyers break away from large firms to take start-up route, banking on niche expertise,” *The Economic Times*, 16 December 2014, http://articles.economictimes.indiatimes.com/2014-12-16/news/57112367_1_law-firms-azb-khaitan-co;

9“Liberalization of legal services in India,” *Governance Now*, 27 July 2015, <http://www.legalleague.co.in/TheLiberalisationBuzz.pdf>

10“Govt may soon liberalize legal services,” *Live Mint*, 6 April 2015, <http://www.livemint.com/Politics/PwlaQ7gOvELjM6TFprSuDO/Govt-may-soon-liberalize-legal-services.html>

11“*The Liberalization Buzz in the Indian Legal Sector*,” *Legal League*, accessed on 16 October 2015, <http://www.legalleague.co.in/TheLiberalisationBuzz.pdf>

I Demand for legal services: Global overview

Demand for Indian exports

Indian legal firms can tap developed markets such as the U.S. and the U.K. as well as developing markets like France, Singapore, etc.

- Among the largest 100 law firms in the world, more than 50 per cent are based out of the U.S.
- The U.K., which constitutes 7 per cent of the global market, is the largest market in Europe¹⁷
- France and Singapore are expected to emerge as significant legal markets, which can be leveraged by Indian firms
- Some countries in Africa are expected to become important export hubs, as they have developed their laws based on Indian statutes

Source: KPMG in India analysis

Indian export growth drivers

India has one of the largest pool of lawyers globally

Indian lawyers have acquired expertise in emerging legal disciplines like mergers and acquisitions, infrastructure financing, public private partnership, etc.

The Indian legal system has a high degree of compatibility, with that of the U.S. and the U.K.

Presence of a skilled and English-speaking workforce

Source: KPMG in India analysis

Indian LPO industry

The Legal Process Outsourcing (LPO) industry gained momentum post the global financial crisis, due to the surge in bankruptcy cases, regulatory compliances, mergers and acquisitions and cost pressures on firms. Consequently, there was a significant demand for documentation review and legal research work, and firms decided to outsource this work on account of the rising legal expenses.¹⁸

The Indian LPO industry became a favoured destination for outsourced legal work, due to reasons such as the availability of a large pool of skilled English-speaking workforce, similarity of the Indian legal system with the U.S. and the U.K., free trade policy of India and domain specific expertise of Indian legal professionals. In India, about 18,000 professionals were expected to be engaged in the industry by end of 2015, with a total revenue of USD960 million, while globally, the LPO segment was expected to reach USD1.3 billion by the end of 2015.

Indian firms are expected to face competition from firms based in Vietnam, China, Hungary, the Czech Republic and the Philippines.

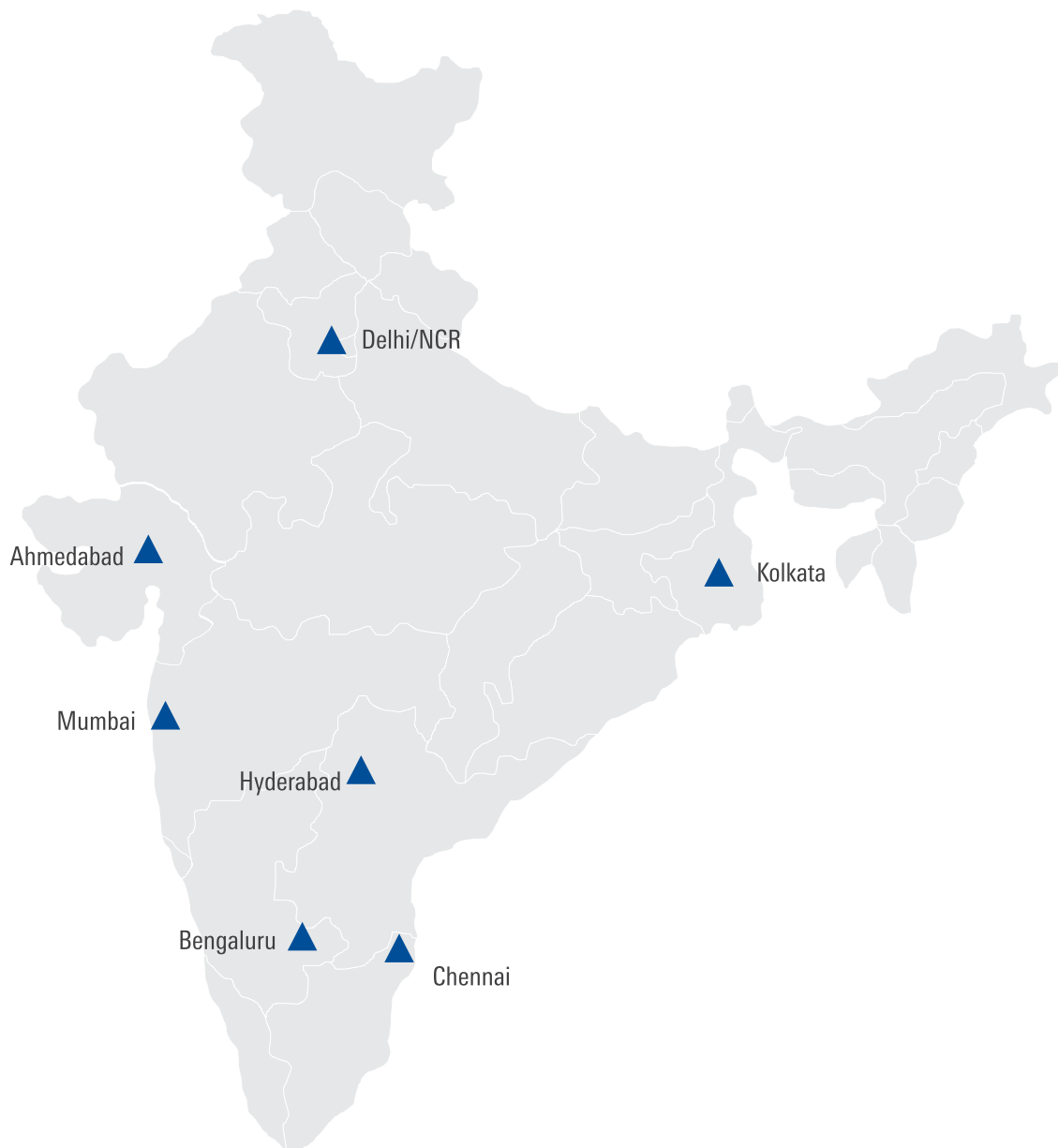
The workflow assigned to Indian LPO firms has progressed gradually from searching case laws, statutes, rules and regulations at the outset to drafting legal documents such as patents and conducting a due diligence and document review, in the recent times. To leverage the rise in the LPO segment, Indian firms are striving to build a team of talented and skilled workforce, and are also engaging the U.S.-based lawyers to conduct trainings for their Indian counterparts in order to enhance their service offerings.¹⁹

Source: 17 "The City: Legal Services," Bar Council UK Report, January 2014, <http://www.barcouncil.org.uk/media/278588/legal-services-2014.pdf>;

18 "Legal Process Outsourcing (LPO) – Continuance, Functioning and Challenges," India Law Journal, accessed on 7 October 2015, http://indialawjournal.com/volume6/issue_1/article6.html

19 "LPO- Fastest growing segment in India," Sourcing Notes, 12 March 2014, <http://www.sourcingnotes.com/content/view/913/1/>

| India's profile in the sector: Clusters of legal services in India²⁰



- Legal firms are primarily situated along the major business hubs of India, as their corporate clientele includes small and big firms that are concentrated along these locations.

- Further, these cities have well-developed infrastructure in terms of transport, power, etc. along with a skilled workforce due to the presence of law colleges in the vicinity.

Source: 20 "Hg.org", accessed on 15 October 2015, <http://www.hg.org/firms-india.html>

| India's profile in the sector: Mode-wise potential²¹

Modes	Description	Applicability to exports of legal services
Mode 1: Cross-border	Services are provided to foreign firms through various telecommunication means such as emails and phones	This mode has acquired a prominent status with the recent progress of the LPO industry in India
Mode 2: Consumption abroad	Indian firms offer their services to foreign firms established in India	Indian legal professionals are in demand, as foreign lawyers or law firms are prohibited from practicing law in India, and consequently this mode has become significant for the growth of this industry
Mode 3: Commercial presence	Indian firms establishing their offices abroad to provide legal services	There are only a few law firms in India, that have set up their offices abroad
Mode 4: Movement of natural persons	Indian professionals are sent abroad by their respective companies to provide services	This form of export is not applicable to the Indian legal services industry



Mode 1:

This mode has considerable potential, as the global LPO industry has entered into a high growth phase and Indian professionals are in demand due to their proficiency in English, similarity between Indian and other countries' legal systems and relatively lower labour costs.



Mode 2:

Demand from foreign firms is anticipated to increase on account of liberalisation of Indian legal services, which is expected to take place in a phased manner. Also, the economy is poised to grow, which could result in an increased amount of FDI, flowing into India.



Mode 3:

Liberalisation reforms in the legal sector and bilateral trade agreements could propel movement of Indian firms to foreign countries.



Mode 4:

It is not applicable to the Indian legal services industry.

| Case study: An Indian law firm



- The firm, founded in 1991 with a capital of USD2,000 (INR50,000), is one of the significant players in the Indian legal services industry. The company grew steadily with a strength of 19 lawyers in eight years. In 1998, two new partners were elected²²
- In 2003, policies such as disallowing family members from joining the firm, setting a retirement age and a broad-based management structure and a fair mechanism for profit-sharing at the equity partner level, were formed. These policies made sure that unlike many large Indian law firms, the firm does not become a family-run enterprise
- Gradually, six new practices were introduced and the firm became the first Indian firm to incorporate Microsoft Dynamix, an Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM) system, to establish transparency in the organisation. It facilitated any partner to track parameters such as revenue and cost in real-time²³
- Currently, the firm has over 350 professionals working in practice areas such as banking and finance, capital markets and securities, corporate compliance and dispute resolution, across industries like consumer and industrial products, financial services and banking, infrastructure and energy and transportation
- An affiliate of the firm, specialises in niche areas like intellectual property laws, including patents, trademarks, copyrights, designs, geographical indications, plant varieties and trade secrets and related matters

| Success factors



- In its initial days, the firm was able to leverage the inclination of foreign clients to invest in India post liberalisation, as clients required legal advice in areas such as FDI approvals
- The firm's 'one nation one firm' approach, aimed at establishing an institutionalised structure in areas such as ownership and the management board, has facilitated the firm to serve clients with a team approach
- The management structure does not allow competition amongst its geographically dispersed offices to poach clients or projects, consequently resulting in greater cross collaboration in the firm²⁴
- The firm has established expertise in areas such as intellectual property, projects and energy and capital markets²⁵

Source: 22 "Jyoti Sagar Associates," accessed on 14 October 2015, <http://www.jsalaw.com/index.html#>

23 "How Jyoti Sagar & Berjis Desai made JSA partners in profit," *The Economic Times*, 10 February 2012, http://articles.economictimes.indiatimes.com/2012-02-10/news/31046381_1_law-firm-equity-partners-azb

24 "In Conversation with Jyoti Sagar," *Legal Era*, 12 November 2012, <http://www.legalera.in/interviews/item/28-in-conversation-with-jyoti-sagar.html>

25 "J Sagar Associates (JSA)," *Legally India*, accessed on 15 October, [http://www.legallyindia.com/wiki/J_Sagar_Associates_\(JSA\)%23Management_Strategy](http://www.legallyindia.com/wiki/J_Sagar_Associates_(JSA)%23Management_Strategy)

Competition



United Kingdom: Exports originating from the U.K. amounted to USD6.4 billion (GBP4 billion) in 2012, with vital contributions from law firms, barristers, lawyers and legal entities. More than 1,000 barristers contributed GBP90 million in exports, whereas GBP23 million worth of exports were generated by lawyers.²⁶

United States of America: Legal services exports from the U.S. reached USD7.5 billion in 2011, registering a uniform growth of 4 per cent from 2007 to 2011. The top five markets constituted more than 50 per cent of the share of the exports, with the U.K. and Japan having 16 and 14 per cent share, respectively.²⁷

China: Chinese firms have started exporting legal services, as some of the prominent international law firms enter China. Other factors contributing towards rising exports are liberal trade policies, alliances with Hong Kong firms and strategic planning by Chinese firms. Also, the One Belt One Road (OBOR) policy followed by China, with countries aligned to the silk route, has facilitated formation of key alliances with countries.²⁸

| International experience:²⁹

- Several important Asian countries such as China, Singapore, Indonesia and Malaysia, have all initiated reforms, in various degrees, and are gradually liberalising their legal services sectors. On the other hand, developed countries like Japan, the U.S. and the U.K. already have relatively open legal services sector, but subject to specific domestic regulations.
- Singapore, which today is a hub for South-East Asia, including Indian legal activities, too adopted a calibrated approach to legal services liberalisation. It is only pertinent that India also ushers in at least basic reforms similar to what was initiated by Singapore almost 15 years back

Source: 26 "The City UK: Legal Services," Bar Council UK Report, January 2014, <http://www.barcouncil.org.uk/media/278588/legal-services-2014.pdf>;

27 "Recent Trends in U.S. Services," U.S. International Trade Commission, 2013 Annual Report, <https://www.usitc.gov/publications/332/pub4412.pdf>

28 "China's Latest Export: Legal Services," Bloomberg, 6 October 2015, <https://bol.bna.com/chinas-latest-export-legal-services/>;

29 "Ministry of Commerce, Government of India,"

| Global trends^{30,31}

1 A significant part of a legal firms' business is derived from the financial services sector. Hence, the robust financial markets of the U.K. and the U.S. also have an established legal market.

2 International law firms have entered into developing geographies such as Asia and the Sub-Saharan Africa.

3 The industry is witnessing consolidation, as the leading 15 firms accounted for more than 50 per cent of the revenues of the leading 100 firms in the world, thereby registering an increase of 2 per cent over a year.

4 Emergence of the LPO industry has provided clients with a low-cost methodology and made in-house legal departments redundant in small and medium sized corporates.

5 Demand for legal services is primarily driven by Asian and Latin American countries, as the U.S. and European countries witness slow economic growth and financial crisis.

6 The legal services industry has undergone a paradigm shift from a seller's market to becoming a customer-focussed one, as clients/buyers are making critical decisions related to scoping, costs, staffing, etc.

Source: 30 "UK Legal Services 2015," The City UK Research, February 2015, <http://www.lmaa.london/uploads/documents/UK-Legal-Services-2015.pdf>;

31 "State of the Legal Market," Georgetown University Law Department, 2013, <https://www.law.georgetown.edu/continuing-legal-education/executive-education/upload/2013-report.pdf>

Strengths and opportunities



Strength

- India has a large pool of skilled law professionals.
- The LPO industry has recently emerged in India and has employed a significant number of lawyers, giving them an opportunity to work with international clients.
- The Indian legal services industry has registered a robust financial performance over the period 2007-12, as the turnover and profit margin registered a strong growth.

Source: KPMG in India analysis

Opportunities

- Liberalisation of the legal services industry is expected to result in the entry of foreign firms in India due to saturation in the growth of legal services in the U.S. and the U.K., and increasing demand in the Asian and Latin American countries.
- Indian legal professionals shall get exposure to global standards and practices, if they are allowed to enter India.

Source: KPMG in India analysis

I Skills required

The legal services industry offers various opportunities across domains, such as advocacy, solicitation, research, analysis, consultancy, academics, arbitration and jury. A legal counsel could take up law practice in areas including civil, criminal, income tax, sales tax, Intellectual Property Right (IPR), matrimony, excise and customs, etc.³²

To make a career in the legal profession, a Legum Baccalaureus (LLB) degree is mandatory and for further advancement, one can also opt for Legum Magister (LLM), which is a post-graduation course.

A lawyer is required to have fluency in both, written and verbal English, as a lot of the job responsibilities include presenting cases and writing legal documents.

Other than language, strong analytical and presentation skills are also needed, as they facilitate strategic planning and presentation of the cases in the courts. Besides these, good research skills also help lawyers in preparing for their cases.

Recently, technology has acquired a prominent position in the legal services industry, as lawyers are required to have proficiency in operating systems and certain software, which help in document management, litigation, etc.

In India, several graduate lawyers require extensive training under a senior lawyer, to learn the intricacies of the profession.³³

Source: 32 "Legal Profession – What is it all about being a Lawyer," Vakilno1, accessed on 8 October 2015, <http://www.vakilno1.com/legal-faq/legal-profession-faq.html>

33 "Law as a career," Universal Institute of Legal Studies, 8 October 2015, http://unilawinstitute.com/law_career.asp

Enhancing legal services exports from India: Assistance required by an Indian firm³⁴

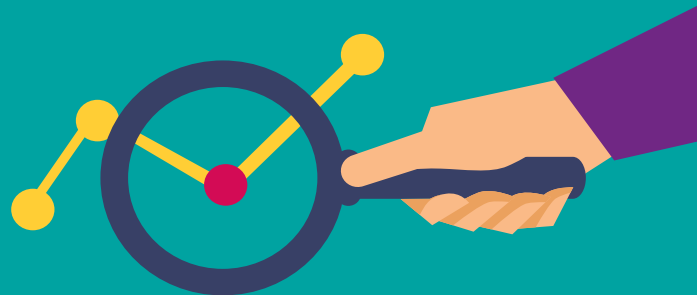
Skill development	Indian law school graduates might not possess the required skill sets needed for employment, immediately after graduating from colleges. Hence, their curriculum could be redesigned to include skill-based trainings.
Amending laws	Certain laws, which prohibit Indian legal professionals from advertising their services, could be amended to facilitate their growth across diverse business areas in legal services.
Raising capital	The Indian legal services industry has a significant number of lawyers practising on their own and generally, it is difficult for them to raise capital in order to expand their business.
Global practices	Seminars, workshops and trainings could be conducted by the government or industrial bodies such as the Bar Council of India (BCI), for imparting global standards and practices to Indian law professionals.

Enhancing legal services exports from India: Approaching international market¹

Develop expertise in niche areas	Indian law professionals could strive to develop expertise in specific areas of law such as bankruptcy and intellectual property rights, as per the demand pattern in the global market
Participation in events	Indian professionals could participate in events having an international audience, to increase their visibility and showcase their skill sets.
Support liberalisation reforms	Indian legal professionals, along with industrial bodies, could lend their support to the Indian government's push towards reforms, which could allow significant business opportunities to flourish in the future.
Trade pacts and treaties	The Indian government could also formulate trade agreements with certain countries, facilitating the entry of Indian firms in foreign countries.

Source: 34 KPMG in India analysis

Reforms



I Introduction³⁵

Reforms in the legal services sector are important to project India as an investor-friendly country having a sound legal framework providing the necessary ease of doing business. There has been a long pending demand for reforms in this crucial area.

I Rationale for legal services reforms³⁶

Some of the important reasons for reforms in legal services have been enumerated below:

- Reforms in legal services assume significance in the context of the 'Make in India' initiative launched by the government and to improve the ease of doing business in India.
- Legal services reforms, which may allow the entry of foreign law firms into the country, are expected to improve job opportunities for the large pool of Indian lawyers. India has about 1.2 million registered lawyers and about 80,000 new law graduates are added every year.
- With the advent of liberalisation and a large number of international companies setting up bases in India, opening up of legal services to foreign competition might be in the interest of corporate consumers in India, both Indian and foreign. These consumers need advice not only with respect to Indian law, but also in various aspects of international law and third country laws in areas related to trade and investment, intellectual property, corporate finance, project finance, environmental protection, competition law, corporate taxation, infrastructure contracts and dispute resolution services.
- India has the potential to become one of the main destinations for LPO services such as legal transcription, paralegal services and legal coding, corporate secretarial services, data entry, litigation support, etc. Some of the country's strengths include having the world's largest pool of lawyers with knowledge of the English language, similarities between the Indian legal system and the legal systems in the U.K., U.S., Canada, and large parts of Europe, India's strength in IT and Information Technology enabled Services (ITeS), labour cost and time zone advantage, etc.
- Reforms in legal services can also provide a boost to India's export of legal services. India's exports and imports of legal services have increased from USD388 million and USD88 million respectively in 2005 to USD754 million and USD249 million respectively in 2013-14. It may be noted that the growth rate in the country's legal services imports during this period (of around 180 per cent) is almost double the growth rate in exports (of around 90 per cent). This is because many high-end legal services, advisory services relating to international law and third country law and advice relating to corporate and commercial law are being imported from abroad. Further, commercial arbitrations involving Indian companies are being conducted in regional hubs like Singapore and not in India. Necessary reforms in legal services should reverse this trend.
- The case for legal reforms is driven primarily by domestic needs. In addition, the request for opening up of the legal services sector in India has been received by the country in bilateral as well as multilateral fora.

Source: 35 "Ministry of Commerce, Government of India,"

36 "Ministry of Commerce, Government of India

I India's profile in the sector: Strategies to promote growth³⁷

Short-term	Medium-term	Long-term
<ul style="list-style-type: none"> – Laws prohibiting Indian firms from advertising their services and restricting them from entering into a profit or fee-sharing agreement with a non-legal entity, could be amended to facilitate the potential of business and scope of work. – Industrial bodies and the government could help Indian legal firms in adopting global practices and standards, across supporting areas such as technology adoption and knowledge management processes, for standardisation of workflow. – The Government of India, along with BCI, could help lawyers in raising capital from financial institutions. – Developmental tools - It is important to permit law firms to issue brochures, host websites, directory listings, allow sponsorship of events, free access to bank finance, increase the limit of professional indemnity, etc. and other means of market development and information dissemination for a firm. The Bar Council of India rules need to be accordingly amended.³⁸ – Operationalisation of the Limited Liability Partnership (LLP) structure for advocates - In India, there is unlimited liability of the partners in a partnership firm. As against this, big law firms of the U.S. and the EU provide limited liability to their member partners, with only one or more equity holders bearing unlimited liability. Thus, there is a clear need to operationalise the Limited Liability Partnership Act, 2008 for advocates which might help them to limit their liability. – Limitation on size - Partnerships are the only permitted model of practice for law firms in India. Until recently, there was a limit on the maximum number of partners of 20 in any partnership firm. This limitation has for long stunted the growth and size of Indian law firms. As stated in para 3.2 (iii), this limitation has now been removed as per the provisions of the Companies Act, 2013 but still the size of the Indian firms is much smaller compared to their global counterparts. 	<ul style="list-style-type: none"> – Cross-border transactions could be promoted, as they serve as an important platform for Indian firms to gain experience of working with international clients – The LPO industry could be encouraged by adopting measures such as motivating participation in trainings conducted by overseas law practitioners, promoting legal professionals to join the LPO industry and forming appropriate trade policies with certain countries like the U.S., the U.K., etc. – Indian law school graduates could be provided with certain training modules during their curriculum that bridge the gap between actual practice and theoretical knowledge. – Multidisciplinary Practicing (MDP) firms - Multidisciplinary practicing firms employing lawyers, accountants, economists, taxation experts and management consultants are required to provide a legal supermarket of advisory services. Such MDP firms, also referred to as composite or full services firms, are not allowed in India. In this highly competitive sector, where specialisation is the order of the day, allowing MDP firms may be important if Indian law firms have to compete with leading firms in the world. Allowing MDP firms might require remuneration sharing with professionals who are not necessarily advocates. There is mixed international experience as different professionals are regulated by different regulations and therefore, this needs careful consideration. 	<ul style="list-style-type: none"> – To promote the export of legal services, Indian law professionals need to adopt practices in sync with their international counterparts and client requirements. Consequently, Indian lawyers should be allowed to work with foreign firms, without the requirement of surrendering their practice certificate – Liberalisation of the legal services industry in India could facilitate entry of foreign firms in India, that might subsequently result in an increased FDI inflow, greater knowledge transfer and growth of the industry. – To make India a hub for international arbitration and mediation services, it needs to open up international arbitration and mediation services. The necessary architecture needs to be in place for participation of foreign arbitrators in international commercial arbitration in India. The country also needs to develop an institutional framework for commercial arbitration as against 'ad-hoc' arbitration prevalent in India. Institutional arbitration has come up very well in cities like London, Paris, Singapore, Dubai, Kuala Lumpur, etc. with government assistance. Apart from facilitating inexpensive and speedy justice, institutional arbitration can be a huge source of revenue for India. There is a need to have good centres of excellence. This can be achieved with the support and initiative of the government.

Source: 37 KPMG in India analysis;

38 "Ministry of Commerce, Government of India"

Regulatory Architecture



I Regulatory architecture³⁹

Regulators

- Ministry of Law and Justice
- Bar Council of India (BCI)
- State-wise Bar Council of India

Relevant Acts:

- The Legal Services Authorities Act, 1987
- Advocates Act, 1961
- Indian Bar Councils Act, 1926
- Partnership Act, 1932
- Companies Act, 2013

Clarity in the Advocates Act⁴⁰

- Clarity is required in the Advocates Act on the possibility of foreign lawyers/foreign legal consultants advising on non-litigious matters and the provision that only citizens of India can provide legal services in the light of the Bombay High Court Judgement dated 16 December 2009 and later judgements by the Madras High Court and the Supreme Court interim order that the expression 'to practice the profession of law' covers practising litigious matters as well as non-litigious matters. Further, there are other grey areas in respect of Indian professionals such as Company Secretaries or Chartered Accounts who are not enrolled to 'practise' law as advocates but render advice on various aspects of corporate and taxation law. The government needs to clarify if these are also considered as illegal.



Small and medium enterprises

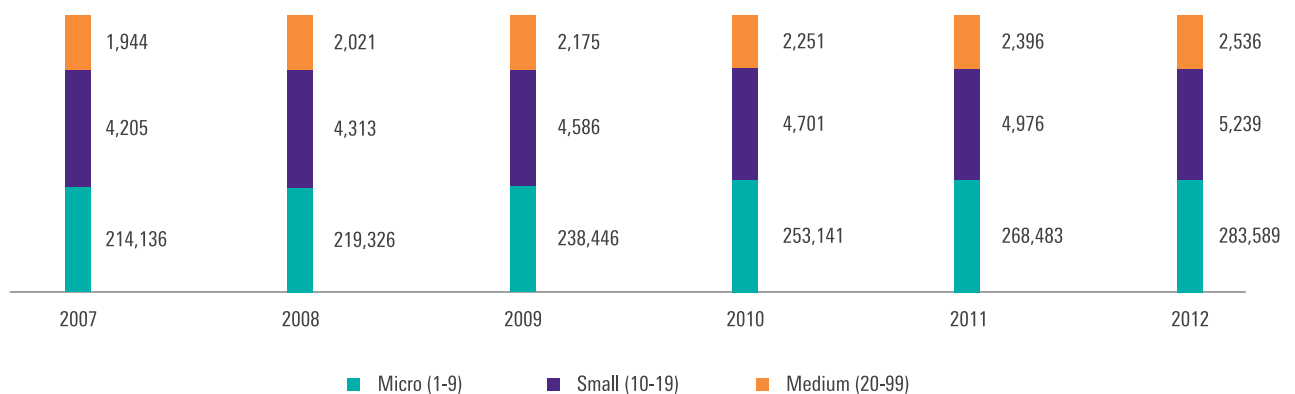


I Small and medium enterprises

Due to the high growth rate of small and medium businesses in India and comparatively expensive services provided by large Indian legal firms, the industry has witnessed a surge in small and medium legal companies.

The micro, small and medium-sized firms increased with a CAGR of 5.8, 4.5 and 5.5 per cent, respectively, between 2007 and 2012, registering a net addition of 71,149 companies in the period.

Number of companies by size⁴¹ (by number of employees)



Source: "LEGAL SERVICES IN INDIA: ISIC 7411," Euro monitor Report, October 2013

Trends⁴²

- Lawyers are leaving established companies to start their own ventures
- Incumbent upon the opening up of the legal sector in India, greater collaboration can be expected between small sized Indian law firms and foreign legal entities.

Challenges⁴³

- Big law firms are reducing their fees in order to attract more clients, consequently increasing the level of competition for smaller companies
- Clients are asking for structural changes, especially in sync with international practices in areas such as technology adoption and knowledge management processes followed by international firms.

Source: 39 "Liberalization of legal services in India," Governance Now, 17 July 2015, <http://www.governancenow.com/news/blogs/liberalisation-of-legal-services-in-india>:

40 "Ministry of Commerce, Government of India

41 "LEGAL SERVICES IN INDIA: ISIC 7411," Euro monitor Report, October 2013

42 "India Business Law Directory, 2015," India Business Law Journal, Accessed Feb 2016, <http://www.indilaw.com/pdfs/India%20Business%20Law%20Directory.pdf>

43 - KPMG in India Analysis

The logistics sector

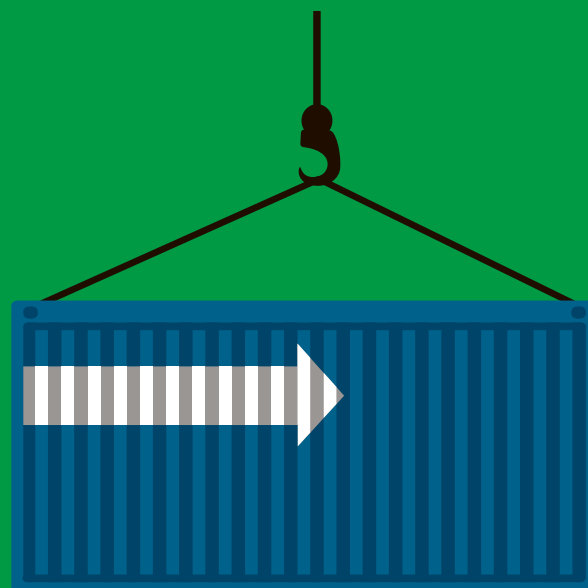


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Sector overview¹



The logistics sector has become an integral part for the economic development of India, and is among the high growth focus sectors in the country. The Indian logistics sector is evolving significantly, driven by the rising investments, mega infrastructure projects and favourable regulatory policies, amid an improving economy. The sector encompasses road and rail transportation, shipping (including coastal shipping and inland waterways transportation), and logistics services — including warehousing, freight forwarding, cold chain logistics, express logistics and outsourced logistics.

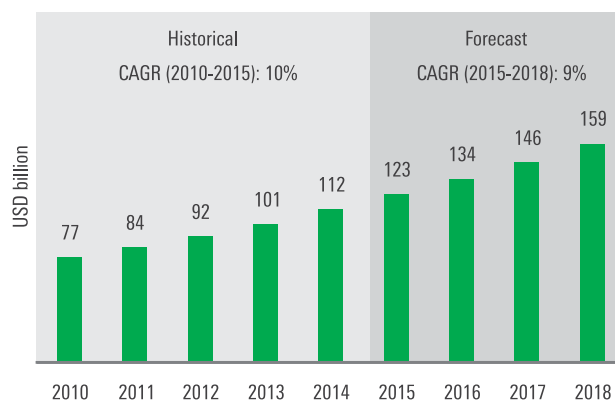
The growing emphasis on alternative transport modes, rapid infrastructure investments, rise in outsourcing, driven by growing business complexity, significant drop in fuel prices and the imminent roll-out of the Goods and Services Tax (GST), are expected to be positive enablers for the sector. From a policy and regulatory perspective, the integration of various logistics ministries, the emphasis on the 'Make in India' initiative and the launch of mega-infrastructure initiatives in the sector are expected to lay the foundation for the sector's growth.

Logistics market: Revenue growth and forecasts

I Market size and growth

The Indian logistics market, valued at USD123 billion in 2015, is poised to reach approximately USD160 billion by 2018, growing at a CAGR of about 9 per cent.¹ The sector is witnessing a shift in priorities, from optimisation to innovation, global to domestic focus, and from cost saving to investment-ready modes. The transportation, logistics, warehousing and packaging sectors in India currently employ approximately 16.64 million people, with about 89 per cent employed in the road transport segment alone.¹ Going forward, the growth momentum for the sector is likely to continue, which in turn is likely to create job opportunities for a large part of the workforce.

The core of the logistics sector, to deliver goods 'on-time, in- full, at the right place, condition and cost', may continue to remain unchanged, although, the expectations of logistics buyers and end-consumers is expected to be heightened. Additionally, the market faces challenges due to a high degree of fragmentation, below par infrastructure and skill sets, and low IT penetration, resulting in an acute operational inefficiency.



Source: KPMG in India analysis, based on industry observations and discussions, 2015

Some of the key trends anticipated in the market include¹:

- **Polarisation** of market share and activities to groups of companies across logistics segments, is likely to be driven by their growing market presence and ability to leverage economies of scale.
- **Vertical focus** could dominate the strategy of operators as they concentrate resources on addressing sector-specific supply chain opportunities.

Source: 1 KPMG in India analysis, based on industry observations and discussions, 2015, 28.4 million skilled workforce needed in Logistics sector by 2022, The Times of India, <http://timesofindia.indiatimes.com/india/28-4-million-skilled-workforce-needed-in-Logistics-sector-by-2022/articleshow/47513316.cms>, accessed on August 20, 2015

- **Talent infusion** could become a priority as operators seek fresh perspectives to reinvent and modernise existing capabilities.
- **Transformation** of the market as several established players breakaway from legacy operations and business processes towards a modern approach to address emerging business opportunities
- **Multi-modal operations** are likely to be driven by various initiatives, such as the roll-out of GST and other policies, being promoted by the government to reduce dependence on road transportation.

Growth drivers

- Infrastructure investments
- Rise in outsourcing
- Supply-side shifts
- Regulatory push
- Improving economy

India's profile in the sector – Exports



The logistics sector in India is primarily driven by domestic revenues. At present, export services form a small part of the earnings in this sector.

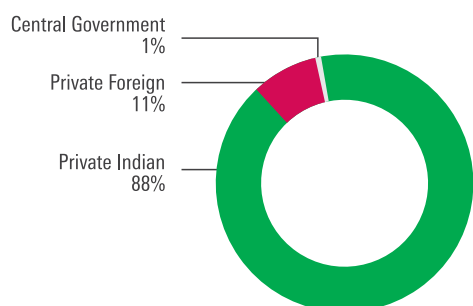
A list of 350 Indian firms involved in the trade of logistics services were identified from the Centre for Monitoring Indian Economy (CMIE) Prowess database in 2013.

These firms generated about USD68.79 billion¹ revenue in the last 10 years, of which approximately USD5.46 billion² or about 8 per cent is in foreign exchange, and could be demarcated as proxy revenue generated through the export of services. Out of the 350 firms, the leading 50 firms

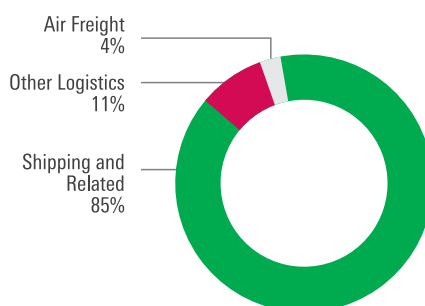
contributed to more than 96 per cent of the total exports in the last decade.²

An analysis of the leading 50 exporters from the CMIE Prowess database in 2013 suggests that private Indian firms contributed to about 88 per cent of the total exports revenue, foreign private contributed to 11 per cent, while the firms owned by the central government contributed to less than 1 per cent of the total export revenues. In terms of service lines, the shipping and maritime segments contribute about 85 per cent of the export revenue.²

Export revenue — by service lines



Export revenue — by entity type



Top export destinations

- Bhutan
- Nepal
- Bangladesh
- Middle East
- South East Asia
- South Asia
- East Africa

Source: CMIE Prowess, KPMG in India analysis, based on industry observations and discussions, 2015

- Specialist/advisor in the logistics sector: Prahlad Tanwar
- Language requirement: Documentation as well as day-to-day operations in most of the leading export destinations is in English.

I India's profile in the sector — Services exported

The Indian firms receive a majority of foreign income by providing services — exports. On the other hand, the country depends on many foreign-based operators for the import of services.³ Thus, export promotion from India could be a function of reforms that is expected to lead to the growth and maturity of Indian logistics services in the respective segments, allowing service providers to develop an international network and expertise. The following outlines India's current profile in logistics exports in diverse segments:

Logistics segment	Current state of exports and mode-wise ^(a) potential ³
Warehousing	<ul style="list-style-type: none"> – Primarily import driven (mode 3), as most customers purchase warehousing from the subsidiaries of multinationals in India. – Limited (mode 2) exports, as fewer international customers pay for warehousing services offered by the Indian players/government agencies. – Limited (mode 3) exports, as the global presence of Indian companies is limited to a few geographies in the Middle East, East Africa and Nepal.
Road freight	<ul style="list-style-type: none"> – Primarily (mode 2) export driven, with payments coming in from overland transit through India for Nepal, Bhutan and Bangladesh-related cargo. – Limited (mode 3) exports due to a lack of operations of large Indian multinationals in neighbouring markets as they are relatively closed and protected. – Limited inward FDI in road freight, as most international freight forwarders prefer to engage with Indian firms through contractual engagements.
Air freight	<ul style="list-style-type: none"> – Primarily an import-driven segment, since the bulk of the international air cargo is carried by global cargo and commercial airlines. – Limited export opportunities in India due to the lack of an air cargo hub. Export income is limited to the operations of the Indian commercial airliners e.g., Jet Airways and their increasing network relationships in Europe, the Middle East and Southeast Asia. – Potential for increasing mode 2 and mode 3 exports by increasing India's integration with global and Asian networks for Indian operators to carry inbound and outbound cargo from India for foreign customers.
Shipping	<ul style="list-style-type: none"> – Exports primarily limited to those international customers who require shipping services to and from India; those providing charter services to international ship liners and are involved in certain South Asia and the Middle East bound routes (mode 1 and mode 3 exports). – Limited (mode 2) exports, with only a small volume of export from coastal and short sea shipping needs for international shipping companies. – Primarily imports driven segment, as the bulk of India's shipping needs are met by international ship liners (mode 1 and 3 imports). – Remittance of income from salaries of Indian seafarers employed by global shipping operators account for a significant foreign exchange inflows (mode 4 exports).

Source: (a) Mode-1 (cross-border supply), Mode-2 (consumption abroad), Mode-3 (commercial presence) and Mode-4 (presence of natural person)

Source: 3 "Services Conclave – Promoting Services Export from India – Challenges, Opportunities and Issues," Ministry of Commerce and Industry, November 2013; KPMG in India analysis, based on industry observations and discussions, 2015

Logistics segment	Current state of exports and mode-wise ^(a) potential
Ports	<ul style="list-style-type: none"> – The exports in the Indian shipping segment is mainly driven by its location as a regional trans-shipment hub. – Substantial (mode 2) imports in the segment that are driven by Indian shipping and other ocean freight related operators, who purchase services from port and terminal operators abroad. – Mode 2 exports are limited, related to the sale of port and terminal services to international ship lines and operators using Indian ports and terminals (a few Indian investors in the port and terminal business operations).
Express logistics	<ul style="list-style-type: none"> – A majority of exports in this segment comes from the operations of the four large integrators. The payments received by the Indian entities of these multinationals to serve the India-based leg of express movements are considered mode 2 exports (or also considered mode 3 imports as part of these payments tend to be notional). – Imports include payments by the Indian operators for the international leg of express deliveries (mode 2 exports).
Freight forwarding and contract logistics	<ul style="list-style-type: none"> – This segment is dominated by imports, as several large multinationals have operations in India (mode 3 imports) and Indian freight forwarders work with several organisations to service their needs in other geographies (mode 2 imports). – Mode 2 exports include payments by international entities for the use of freight forwarding space in India. – Some Indian third party logistics (3PL) firms also offer value-added logistics services in India as mode 2 exports. – Indian firms are operating in global production networks in pharma, engineering, electronics, automobiles use international 3PL forms and freight forwarders for their value-added logistics services, both in India and abroad (mode 2 and mode 3 imports).

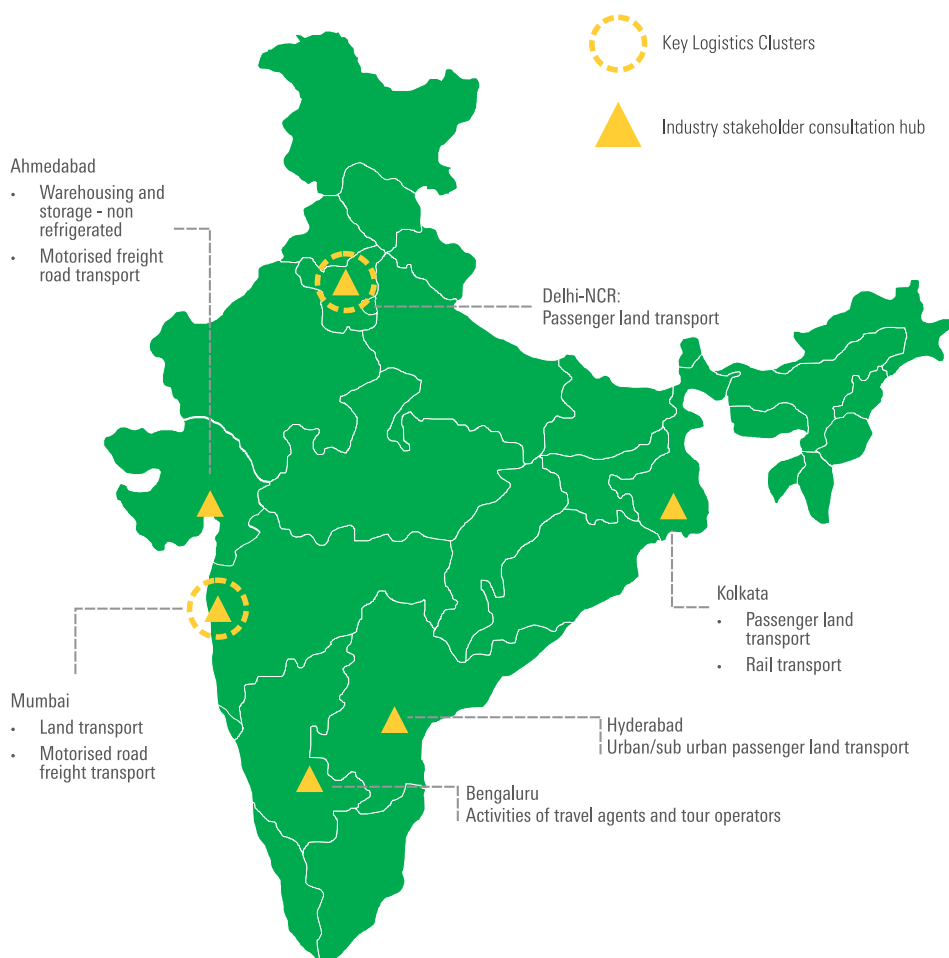
Source: (a) Mode-1 (cross-border supply), Mode-2 (consumption abroad), Mode-3 (commercial presence) and Mode-4 (presence of natural person)

India's profile in the sector — Logistics clusters in India

The transport and logistics sector does not have clearly defined clusters. Broadly, India could be segmented into six to seven logistics clusters spread across the country, each specialising in unique service lines.¹ The Delhi-NCR (National Capital Region), Kolkata and Mumbai clusters specialise in land transportation, while the Ahmedabad cluster specialises in warehousing and storage of non-refrigerated products. The Kolkata cluster is also a hub for rail transport, while the Mumbai and Ahmedabad clusters specialise in motorised freight road transport.¹

Overall, Mumbai, Kolkata, Hyderabad, Ahmedabad, Bengaluru, Surat and Indore have been identified as high growth clusters.⁴

The sector stakeholder concentration hubs could be established in the northern or the western cluster for enhanced connectivity and proximity to a majority of clusters (as depicted below).



Key logistics clusters

North

NCR, Amritsar, Ludhiana, Moradabad, Kanpur, Jaipur, Lucknow, Varanasi

East

Kolkata, Patna, Guwahati, Gaya

West

Mumbai, Pune, Nagpur, Nashik, Ahmedabad, Baroda

South

Chennai, Hyderabad, Bengaluru, Coimbatore, Cochin, Mangalore, Trichi

I India's profile in the sector — A case study

A leading India headquartered integrated logistics multinational — Going global^{5,6}

The company was established in 1993 as a cargo handling operator at the Mumbai port. The company started off as a Less-than Container Load (LCL) consolidation agent for the Antwerp-based ship line in 1995 and went on to fully acquire the company in 2005. It continued to add new business verticals such as project and equipment engineering solutions, operating container freight stations and inland container depots, multimodal transport operations, coastal shipping, etc.

The company acquired the freight forwarding arm of a leading tour and travel operator, followed by the acquisition of a couple of companies based in Hong Kong and engaged in Non Vessel Owning Common Carrier (NVOCC) business in China and other regions. Further, the company acquired a U.S.-based logistics company in 2013, to enter the U.S. and Canada markets and strengthen footprint in freight consolidation and Full Container Load (FCL) services to almost all parts of the globe. The company's focus on strategic growth through acquisitions was the key to its success.

As of today, the company operates as a multinational leader in logistics with presence in over 90 countries, with over 200 offices globally. It has over 8,500 team members across its offices worldwide.

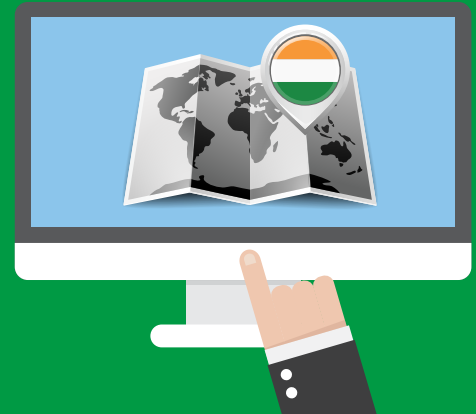
Factors that contributed to its success:

- First-mover advantage into the niche LCL business
- Strategic acquisitions for rapid expansion into global markets
- Complementary strategy for business, wherein the company depended on shipping lines for its Container Freight Station (CFS) business. At the same time, it utilised the shipping lines for the container volumes of its multimodal transport operations, thus making both parties interdependent on each other for some businesses.

Source: 5 'How Allcargo Logistics became a global player,' Livemint, <http://www.livemint.com/Specials/lluYS5KvKMm8z975Km4UjO/How-Allcargo-Logistics-became-a-global-player.html>, accessed on 13 March 2015;

6 Allcargo Logistics, www.allcargologistics.com/, accessed on 13 March 2015

Competing with India



The United States and Europe are leaders in exporting logistics services with an established infrastructure and capabilities; Dubai and Singapore have also emerged as major trans-shipment hubs with suitable capacity and infrastructure. In terms of air freight and air express markets, a majority of exports come from the operations of the four large integrators.⁷

In the short term, India could aim at developing a trans-shipment hub for Asia, the Middle East, Africa and Southeast Asia — for both air and ocean freight services. The country could also focus on developing integration with global and Asian production networks for Indian operators

to carry inbound and outbound cargo from India for international customers. In the longer-term, India could focus on developing its capability at a global level by building infrastructure and capacity to offer sophisticated services worldwide.⁸

The focus areas for India to achieve prominence include infrastructure development, enhancing network and resource efficiency, managing collaborations and partnerships for effective utilisation of shared resources, apart from emphasising on innovation of technologies and services.

| Global practices

The leading countries such as Dubai, Singapore and the U.S. attract export opportunities from around the globe, owing to their developed logistics infrastructure and services. The integration of IT into logistics for technology platforms also offer better in-transit visibility, real-time updates and exception notification for both transportation as well as storage, which further distinguish the developed countries with respect to logistics exports.

The countries promote easy transportation and documentation, increased multi-modal transportation of goods, and increased synchronisation with other stakeholders — brokers, freight forwarders, carriers, logistics service providers, etc., — for enhancing exports. The focus is to leverage the strengths of the network of businesses and alliances for cost and lead time benefits.

They also offer more ease of doing business with respect to documentation and regulatory environment through streamlined customs processes and agreements conducive for trading. For instance, information on advanced manifest requirements, changing trade agreements, import export compliance, trade documentation, free trade zones, and new partners and events to promote trade and reduce distribution bottlenecks.

Source: ⁷ KPMG in India Analysis, based on industry observations and discussions, 2015

⁸ "Services Conclave - Promoting Services Export from India - Challenges, Opportunities & Issues," Ministry of Commerce and Industry, November 2013;

Strengths and opportunities



Strengths

- India is witnessing the emergence of asset-light business models that provide end-to-end logistics services
- The country has one of the largest rail networks in the world
- The market has witnessed the consolidation of small and medium size enterprises (SMEs) to provide pan-India presence and improve overall profitability
- There is an adequate labour pool available at a low cost, for basic handling and transport jobs.

Opportunities

- Maturing sector segments, such as automotive, retail, pharmaceuticals and e-Commerce, offer growth opportunities
- The government is focussed on developing support infrastructure, such as Dedicated Freight Corridors (DFCs), Delhi-Mumbai Industrial Corridor (DICT) and container terminals
- There is a rise in domestic and export-import (EXIM) trade to create demand for logistics services
- The implementation of favourable reforms, such as the Goods and Services Tax (GST), is also driving growth.

Source: 1 KPMG in India Analysis, based on industry observations and discussions, 2015

I Skills required⁹

The logistics sector is expected to mature, as key enablers, such as sector-specific approaches, skilled manpower, and customer relationship forming ability, continue to evolve. Innovative training techniques and methods are essential to up-skill manpower to meet the changing needs of the sector.

Skilled manpower

- Professionals with a strong background and knowledge of the sector, for both management and operational roles, are largely sought after in the sector. For instance, driving skills, road safety practices, the knowledge of regulations related to driving, relevant documentation, and licences, are required for heavy vehicle drivers. Skilled manpower for an improved handling and maintenance of shipments from different industries is essential for inventory controllers or warehouse supervisors
- Experienced personnel at management positions also bring in the knowledge of customer relationship management and sector know-how to organisations.

Technology

- The sector also requires vertical specialists in technology enablement in logistics services, e.g. Global Positioning System (GPS), Radio-frequency identification (RFID), track and trace, and real-time cargo updates, given the on-going emphasis of technology on logistics
- Additionally, rapid advancements in the sector require up-to-date information, business intelligence and real-time data analysis for efficient planning and operations.

Source: 9 KPMG in India Analysis, based on industry observations and discussions, 2015

Foreign Direct Investment (FDI) policy for the sector¹⁰

The Government of India has actively pursued policies to promote FDI in the Indian logistics sector. Investments by foreign companies can be made via the automatic route, which does not require approval by the Reserve Bank of India (RBI) or via the government route. According to the latter, a prior approval is sought from the government through the Foreign Investment Promotion Board (FIPB).

Up to 100 per cent FDI under the automatic route is applied under the following segments:

- Courier services for carrying packages, parcels and other items, which do not come within the ambit of the Indian Post Office Act, 1898
- Storage and warehousing, including warehousing of agricultural products with refrigeration (cold storage)

- Industrial parks, new and existing
- Transport and transport support services allowed for pipeline, ocean and water, and inland water transport, for the operation of highway bridges, toll roads, loading/unloading of vessels, cargo handling incidental to land, water and air transport.

Up to 49 per cent FDI is allowed for domestic scheduled passenger airlines under the automatic route, and up to 74 per cent FDI for non-scheduled air transport services, in which 49 per cent is allowed through the automatic route, and beyond 74 per cent with government approval. Further, 100 per cent FDI is permitted in greenfield airports under the automatic route, while for the existing airport projects, 100 per cent FDI is permitted, with up to 74 per cent through automatic route, and beyond 74 per cent with government approval.

Source: 10: "Consolidated FDI Policy," Department of Industrial Policy and Promotion Ministry of Commerce and Industry, Government of India, 12 May, 2015

Enhancing logistics services exports from India¹¹



The government could develop a multi-level approach to promote logistics exports from India. The focus could be on building infrastructure and capacity, as well as capability in the logistics sector, combined with the use of IT solutions, to propel growth. Under an overall regulatory logistics body, this could ensure involvement and coordination between various stakeholders, and also frame conducive policies for export promotion. Some of these include:

- Encouraging the development of global logistics and business centres in India (e.g. regional headquarters and regional distribution centres of multi-national companies (MNCs))
- Encouraging the operations of global and international players in the market
- Promoting a regulatory environment with policies that are conducive to setting up and operating logistics businesses in the market
- Improving service time and quality to bring down the time taken for export customs clearance to a few hours, to ensure a smooth clearance process. For instance, the customs clearance of export cargo in Mumbai takes 1.6 days, while the inland container depot in Delhi takes 3.68 days.¹²

Further, targeting international markets is crucial for exports promotion. India-based logistics players could target growth in international markets by setting up entities in key growth markets.

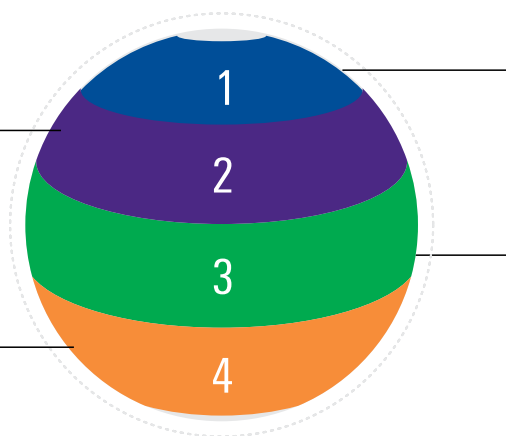
| Enhancing logistics exports from India

Cost reduction and service quality improvement

- Resource allocation and utilisation
- Sharing leading industry practices and process benchmarking
- Encouraging innovation, synergies and partnerships
- Exploiting economies of scale and scope

Export promotion

- Offer advantage in price and service quality
- Frame conducive regulatory and operating policies
- Develop IT enabled infrastructure
- Encouraging global players and leading industry practices



Infrastructure development

- Network and resource optimisation
- Promoting and leveraging IT
- Managing collaborations and partnerships
- Optimal utilisation of shared resources

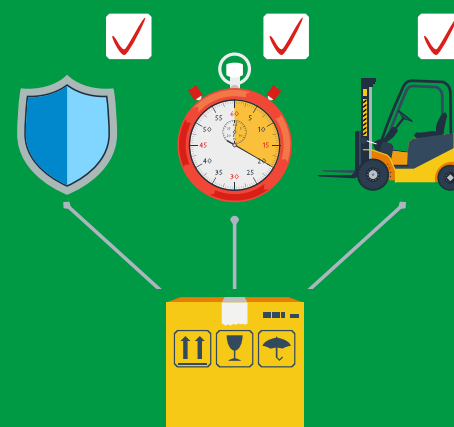
Regulatory body

- Include representatives from various ministries including shipping, railways, aviation, roads and industry associations
- Coordinate between various stakeholders
- Develop, enforce and monitor regulatory and operating policies

Source: 11 "A road map for internal reforms and other actions required to enhance exports in logistic services from India," MDI Gurgaon, 25 September 2013; KPMG in India Analysis based on industry observations and discussions, 2015

Source: 12 "New system may cut export customs clearance to few hours: Chidambaram," The Indian Express, 13 November 2013, <http://archive.indianexpress.com/news/new-system-may-cut-export-customs-clearance-to-few-hours-chidambaram/1194437/>, accessed on 13 May 2015

Reforms required in the sector¹³



As India prepares to evolve into the next level of the logistics growth trajectory, the regulatory policies and infrastructure investments could be enhanced to keep pace with the changing dynamics of the economy. The following reforms for various segments can be taken up for consideration:

Segment	Recommended reforms
Road freight services sector	<p>Green channel for EXIM cargo: The movement of trucks in India is challenged by various rules and acts, such as those governing hazardous goods, quality of products, Essential Commodities Act, customs, excise and sales tax regulations, Motor Vehicles Act and Carriage of Goods Act, which authorise the state governments and other regulators to inspect trucks, that leads to delay in inter-state movements.</p> <p>Trucks carrying EXIM cargo could be allowed to move via a green channel to prevent delays and ensure timely movements.</p> <p>Multiple Trailer Single Horse (MTSH) mode of trucking: The MTSH model allows a single truck to have the flexibility to pull any tractor (i.e. trailer). The roll-out of the MTSH model in India is, however, limited by varied interpretations of the Motor Vehicle Act provisions on tractor-trailers by Regional Transport Offices (RTOs).</p> <p>The Ministry of Road Transport and Highways can instruct RTOs to facilitate independent registration of tractors and trailers to enable them to implement the MTSH model on a national scale. This step could lead to significant cost savings and increased operational efficiency.</p> <p>Inter-state movements: The payment of tolls and taxes enroute a destination, adds to the waiting times spent on long queues that is caused by the inefficiency in the collection mechanisms. The electronic payment of toll, advance payment system or the creation of a single-window collection mechanism could help smoothen the inter-state movements.</p>
Warehousing	<p>Multi Customer Sites (MCS): While the Drugs and Cosmetic Act does not prevent the adoption of global practices in multiple customer warehouses, local procedures by the State Food and Drugs Administration (FDA) insist on physical partitioning/caged separation for clients. This prevents the development of MCS, which could be developed for advanced, yet affordable, pharma logistics solutions.</p>
Air freight transport	<p>Trans-shipment issues: The government is expected to act on the following:</p> <ul style="list-style-type: none"> – Standardise practices followed in different airports for bond or escort for trans- shipments – Address issues that are causing delays due to the issuance of permission for trans- shipments – Make availability a prior permission mechanism for trans-shipment by customs – Provide clarity on multi-mode trans-shipment for domestic or international transport. International multi-modal solutions may be effective in the consolidation of cargo from South Asian nations through Indian airports and ports.

Source: 13 KPMG in India Analysis, based on industry observations and discussions, 2015

I Reforms required in the sector¹⁴

Segment	Recommended reforms
Shipping	Develop regional ocean and airport hubs in India on a priority basis to reduce transaction costs on India's exports.
Postal and courier services	Offer logistics solutions for the Less Than Truckload (LTL) freight needs of the Indian exporters and MSMEs. India Post is working on developing a menu of logistics solutions for exports and imports.
Collective reforms	<p>The need for Electronic Data Interchange (EDI) integration and single window systems development in an integrated online environment for export-import procedures, could include the following:</p> <ul style="list-style-type: none"> – Availability of all services online – Introduction of a single common document – Creation of a single window environment via an effective message exchange system between the independent platforms of agencies to extract information for the single common document – Fully digital environment along with digital signatures and digital signature endorsed scanned copies of all support documents. No further requirement of endorsement by officials of physical copies – Complete digitisation and inter-linking of transport offices across the country.

I Role of logistics in e-commerce¹⁵

Logistics is a key enabler for growth for the e-commerce retail industry and is increasingly emerging as a differentiator in terms of customer service and satisfaction. Logistics in e-commerce retail is evolving with growing business requirements, and is acting as an important lever for business growth. The sector, specific to e-commerce retailing in India, was valued at USD0.2 billion in 2014 and is projected to witness a CAGR of around 48 per cent in the coming five years to reach USD2.2 billion by 2020.

While many e-commerce retailers have collaborated with logistic service providers to fulfil their business requirements, some players have also invested in building in-house logistics capabilities. While a large share (as much as 50 per cent) of the e-commerce logistics market is commanded by in-house logistics players, the other 50 per cent is controlled by third-party logistics (3PLs) service providers, including traditional Logistics Service Providers (LSPs), e-commerce focussed logistics providers, and the Department of Posts in India.

However, apart from increasing competition and the rising demand from tier-III and remote locations, an addressable market is expected to be about 45 per cent of the total, which could be close to USD1 billion in 2020. Also, the focus is now shifting from standard to specialised deliveries, which require 3PLs to invest in new capabilities and building infrastructure.

The **Department of Posts**¹⁶ is also taking initiatives in order to increase e-commerce penetration in the country, in addition to utilising its network for improving last mile connectivity. The government's 'Digital India' initiative aims to increase internet and broadband penetration across the country, which is expected to boost e-commerce. The *Department of Posts* is improving its capabilities for handling e-commerce business and has taken initiatives such as introducing services for cash on delivery. The department has set up 48 new parcel processing centres so far and further plans to set up nine more centres in FY17. It also aims to enhance revenues through increasing its parcel and speed post business.

Source: 14 KPMG in India Analysis, based on industry observations and discussions, 2015

15 "Fulfilled! – India's e-commerce retail logistics growth story," KPMG in India, November 2015

16 "Digital India Initiative Would Further Enable India Post to take E-Commerce to Every Indian," Government of India, <http://pib.nic.in/newsite/PrintRelease.aspx?relid=135877>, accessed on 20 February 2016

| GST in India¹⁷

GST is a wide-ranging value-added tax to be levied on goods and services, and is built on a destination-based taxation system, wherein tax is levied on final consumption. It is envisaged to be a dual tax — encompassing levies by both central and state tax administrations on the same base — to include components on State GST (SGST), Central GST (CGST) and Integrated GST (IGST). The new regime is expected to broaden the tax base, foster a common market across the country, reduce compliance costs and promote exports.

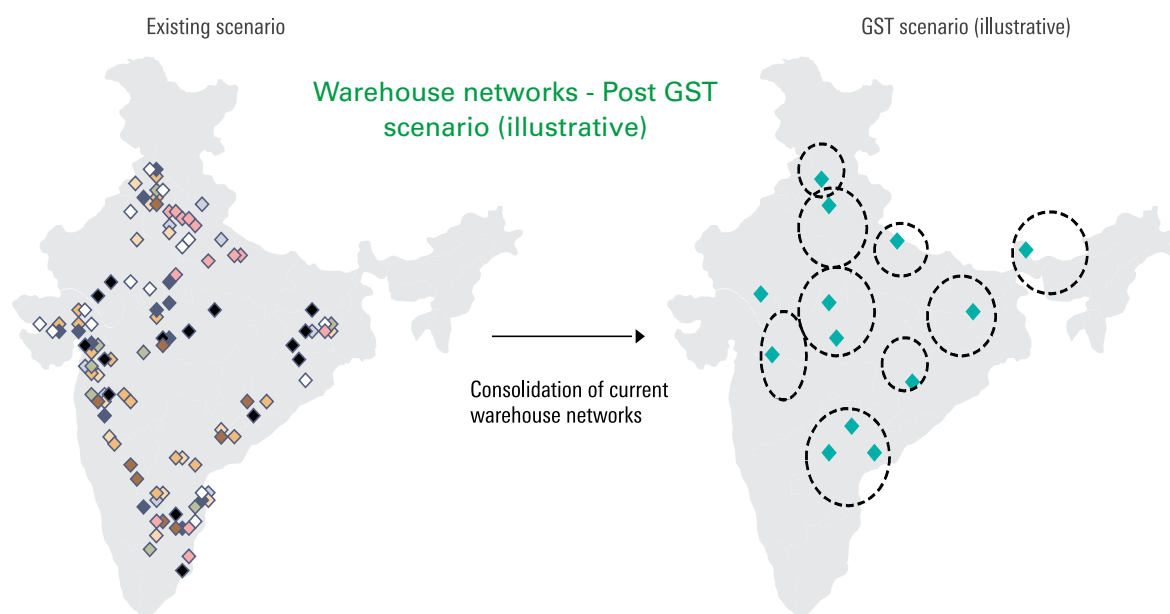
Impact of GST

The GST regime aims at simplifying various indirect taxes and replacing them with a single tax. According to a study by the National Council of Applied Economic Research, the rolling-out of GST is expected to boost India's GDP

growth by 0.9-1.7 per cent¹⁸. Additionally, it provides an efficient way to mobilise revenue and reduce the fiscal deficit. GST is also likely to help companies realign their supply chains to cut costs, in addition to removing cascading taxes, which can be beneficial to the sector to help ease the burden of tax compliance.

Consolidation of current warehouse networks

The roll-out and implementation of GST could lead companies to re-design and enhance their networks to shift to a hub and spoke model, having primary and secondary hubs. The companies may see a change in their warehousing network as several cities such as Guwahati, Lucknow, Nagpur and Chandigarh, emerge as primary hubs, in addition to key hubs— Delhi NCR, Mumbai, Chennai, etc. Additionally, smaller cities — Surat, Alwar, Nasik, Indore, etc. — may emerge as secondary hubs for distribution.



Source: KPMG in India analysis, based on industry observations and discussions, 2015

Hubs

- Delhi NCR
- Mumbai
- Chennai
- Nagpur
- Lucknow
- Guwahati
- Chandigarh
- Ahmedabad

Secondary hubs

- Surat
- Goa
- Kochi
- Alwar
- Visakhapatnam
- Coimbatore
- Thiruvananthapuram
- Jaipur
- Vadodara
- Nashik
- Mangalore
- Ludhiana
- Indo

Source: 17 KPMG in India analysis, based on industry observations and discussions, 2015

18 "Will GST rollout increase India's GDP by 1-2%? Not so soon," MoneyControl, http://www.moneycontrol.com/news/economy/will-gst-rollout-increase-indias-gdp-by-1-2-not-so-soon_1256049.html, accessed on May 1, 2015

I Changes in the logistics landscape

Tax on interstate transactions is expected to only be a pass through, therefore, the location of a plant/warehouse manufacturer is likely to become tax neutral. The interstate sales shall attract tax, which shall be creditable. Also, stock transfers shall attract tax (creditable), resulting in the blockage of working capital. Below are some changes expected in the logistics landscape:

- There is an expected shift of trends in the movement of goods, wherein:
 - Interstate freight is likely to increase
 - The number of depots and stock transfers may experience a decline
- The identification of the number and appropriate locations of depots
- Efficient distribution plans — including movement points and quantity for distribution – are likely to be developed
- Optimising the tax implications
- Assessing the cost for opening and operating depots post implementation of GST.

The removal of cascading taxes is further expected to bring down the tax paid by consumers, thus decreasing the price of goods, which could further boost consumption. While in the medium-term, changes in the logistics landscape and infrastructure may require a lot of capital investment for restructuring and planning, many companies are expected to leverage upon them in the long term, as the resultant improved efficiency of the supply chain may lower logistics costs to 15 to 20 per cent, apart from lowering inventory, improved service levels, etc.

I Free Trade Warehousing Zones¹⁹

Free Trade Warehousing Zones (FTWZ) can play a major role in helping India integrate into global production networks by providing efficient inventory management services that combine value-addition activities related to labelling, integration of local content, packaging, etc. Given their locational and labour cost advantages, they could also help India become an exporter of inventory management services to the region, making it the inventory staging location of choice for South and South East Asia, East Africa, and Middle East economic regions

spanning the Indian Ocean.

However, certain regulatory issues and need for further policy clarification are holding up the growth of FTWZ in India. These challenges are summarised below:

- There are procedural difficulties for claiming duty drawback on exports for FTWZ clients. Essentially, drawback is inadmissible for direct payments by an importer to an exporter who uses FTWZ, and can only be claimed if the importer pays the unit holder in the zone. However, FTWZ is a logistical solution to business, and the export-import relation is between the business and third parties, where the zones do not play a role.
- Export incentives available to Indian exporters under its Foreign Trade Policy is not extended to exports from FTWZ.
- Sales to domestic tariff area from FTWZ are made subject to state VAT and CST, in addition to customs duties (including additional customs duty paid in lieu of domestic taxes). This defeats the purpose of holding international inventory in Indian FTWZ since general imports are not subject to State VAT and CST. This essentially makes the cost of supplying from an India based FTWZ compared to a location in Thailand or Sri Lanka much more cost-effective. This means India is losing precious jobs and service export income to these countries. Additionally, with proliferation of Free Trade Agreements (FTAs), the duties paid for supplying to Domestic Tariff Area (DTA) from FTWZ may be higher relative to the preferential rates applicable to allied countries
- Procedural challenges in the movement of goods from gateway port to FTWZ. Clarification clearly indicating this as a trans-shipment procedure is urgently needed.
- General opinion is that Permanent Established (as defined by double taxation) treaties may be applicable on foreign clients on the use of FTWZ, which has led to a lack of interest on the part of foreign clients from using the same in India.
- Although FTWZ are governed by the general framework applicable to SEZs, their specific needs that are quite different from SEZs have not been well incorporated. A specific programme for FTWZ could help substantially in developing this business in India.

Source: 19 Free Trade and Warehousing Zones (FTWZ) – A Global Trading-Hub, <http://www.ftwz.com/acts/index.php>, accessed on May 1, 2015; KPMG in India analysis, based on industry observations and discussions, 2015

Regulatory architecture



| Government ministries:

- Ministry of Road Transport and Highways
- Ministry of Railways
- Ministry of Civil Aviation
- Indian Ports Association

| Accreditations

Quality:

- ISO 9001, ISO 9001, ISO 14001, ISO 13845
- TS 16949 – aimed at the development of a quality management system for continual improvement, emphasising on defect prevention, and the reduction of variation and waste in the supply chain
- Good Manufacturing Practice and Good Distribution Practice (GMP and GDP) certifications for the manufacture and distribution of medicines in the European Economic Area

Safety

- OHSAS 18001 Certificate for Occupation Health and Safety Assessment Series
- International Safety Management (ISM)

Security:

- Customs Trade Partnership Against Terrorism (C-TPAT)

| Regulators

- International Federation of Freight Forwarders Association (FIATA)
- National Association of Freight and Logistics (NAFL)
- The International Air Cargo Association (TIACA)
- Member of Chartered Institute of Transport (MCIT)
- International Air Transport Association (IATA)

| Relevant Acts:

- The Motor Vehicles Act, 1988
- The Motor Transport Workers Act, 1961
- The Carriage by the Road Act, 2007
- The Indian Carriage of Goods by Sea Act, 1925
- The Indian Ports Act, 1908
- The Inland Vessels Act, 1917
- The Coasting Vessels Act, 1838
- The Merchant Shipping Act, 1958
- The Railways Act, 1989
- The Air Corporations Act, 1953
- The Airports Authority of India Act, 1994
- The Multimodal Transportation of Goods Act, 1993

Small and medium enterprises in logistics



The logistics sector in India is highly fragmented with several small and mid-sized players across regions, asset types and services, with a few players offering end-to-end services. The sector is dominated by SMEs, majorly road transport providers — small truck-fleet operators and single office logistics providers. Transporters with less than five trucks account for over two-thirds of all trucks (owned and operated) in India, and constitute 80 per cent of the revenues.²⁰

As per a Dun and Bradstreet (D&B) survey of 670 MSMEs across industries in India, in the services sector, micro, small and medium enterprises (MSME) logistics companies demonstrated the strongest income and profit growth in FY12 — 28.7 per cent growth in income, and the net profit margin of 5.3 per cent in FY12 in comparison to 3.5 per cent in FY11.²¹

In the micro segment of the services sector, logistics registered the highest income growth of 58.3 per cent and the highest profit growth of 134.6 per cent. In the mid-segment of services industry, logistics registered the highest income growth of 59.7 per cent.

The increasing focus of customers on costs and delivered value has led to the emergence of SMEs as strong regional or sectoral players. Strong local experience, being owner-driven, combined with the flexibility and speed to deliver as per customer requirements, has resulted in their growth.

With the Indian logistics sector aiming at becoming globally competitive, logistics companies, including SMEs, are likely to cater to the requirements of companies that could outsource their logistics services. To meet the growing demand, logistics companies in India are expected to offer an entire range of services, such as warehousing, distribution, the tracking of goods and industry-specific solutions for healthcare, FMCG, etc. SMEs in the Indian logistics sector may be required to adopt innovative models to enhance their efficiency to fulfil the requirements. They could look at adopting the latest IT-based tools, such as Warehouse Management systems (WMS), Transport Management System (TMS), and implement track and trace for 3PL applications, to efficiently cater to customer requirements.²²

Note: For the study, D&B classified companies on the basis of size and total income – micro-sized companies with total income in FY12 at below INR100 million, small-sized companies between INR100.01 million to INR750 million, and medium-sized companies between INR750.01 million to INR1,500 million

Source: 20 Trucking in India: Vibrant, with room for improvement, India Transport and Logistics News, <http://www.itln.in/index.php/pharma-logistics-explosive-growth-on-the-anvil/>, accessed on May 1, 2015

21 Leading SMEs of India 2012, Dun and Bradstreet, November 2012

22 KPMG in India analysis, based on industry observations and discussions, 2015

Research and development in logistics



At present, the logistics sector in India is significantly fragmented with a low degree of automation and technology adoption. The Research and Development (R&D) in the sector requires significant improvement — both in infrastructure as well as skill development. The focus in logistics could be laid on outsourcing, global supply chain management, risk management, and global issues for logistics and transport modes.

Special attention could be given to green logistics and technologies, intermodal transportation systems, urban planning and reducing the carbon impact in the field of transportation, and logistics as well as reverse logistics — including environmental aspects. Additionally, closed-loop supply chains from a waste management perspective, and the construction and enhanced efficiency of transportation infrastructure to reduce carbon footprint are important aspects for R&D.

Advancement in technology is also an important area of focus — particularly the development of RFID systems, Information and Communications Technology (ICT) and green channelling systems — to further improve the sector's performance and improve the supply chain in cities.

Management consultancy



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Sector overview



Management consultancy is an advisory service that aims to enhance organisational performance through identification and analysis of existing problems, and the development and implementation of effective approaches.¹ The management consulting industry encompasses five key segments — strategy, operations, financial advisory, human resources, and Information Technology (IT).²

I Segments and key service areas in management consulting

Strategy

- Strategy consulting, also known as boardroom consulting, facilitates planned decision-making, which impacts the course of business growth. Consultants work directly with C-level executives, such as CEOs, CFOs, COOs, etc., to formulate corporate and business unit strategem.
- Key service areas include corporate strategy, public sector policy, mergers and acquisitions, and organisational and functional strategy.

Operations

- Operations consulting is targeted at enhancing the efficiency across a firm's value chain through effective implementation of business process, cost management, business transformation, and development of service delivery models.
- Key service areas include supply chain, finance, sales and marketing, process management, procurement and outsourcing.

Financial advisory

- Financial advisory services provide approaches based on strong financial analytical capabilities. Financial and accounting skills form the basis of service delivery and address a wide range of business issues such as deal financing, restructuring, transaction support, enterprise risk management and bankruptcy.
- Key service areas include corporate finance, transaction services, restructuring, risk management, and forensics and litigation.

Human Resources (HR)

- HR advisory services are related to the management of a firm's human capital. Services such as redesigning HR processes, developing talent management strategies, leadership alignment, change management, and learning and development come under its ambit.
- Key service areas include organisational change, talent management, HR functions, benefits and rewards, and learning and development.

Information Technology (IT)

- IT consulting services are aimed at the effective utilisation of IT assets, in alignment with a company's business goals. Some of the examples are business process automation, digital risk management, and IT security.
- Key service areas include Enterprise Resource Planning (ERP), data analytics, software management, systems integration, and enterprise architecture.

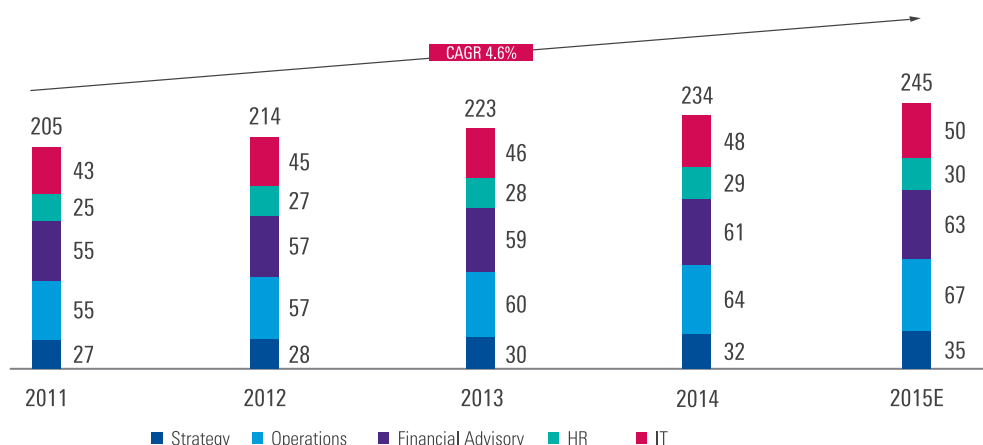
Sources: 1 "The management consulting industry : Growth of consulting services in India," R Srinivasan, <http://www.sciencedirect.com/science/article/pii/S0970389614000883>, December 2014;

2 "Consulting Industry," Consultancy.uk website, <http://www.consultancy.uk/consulting-industry/market-segments>, accessed on 28 September 2015

I Size and growth of the market

In 2014, the global consulting market was estimated to be worth USD234 billion. Operations consulting, financial advisory and IT consulting, altogether contributed an estimated 74 per cent of the total market size.³

Global management consulting market size (USD billion)



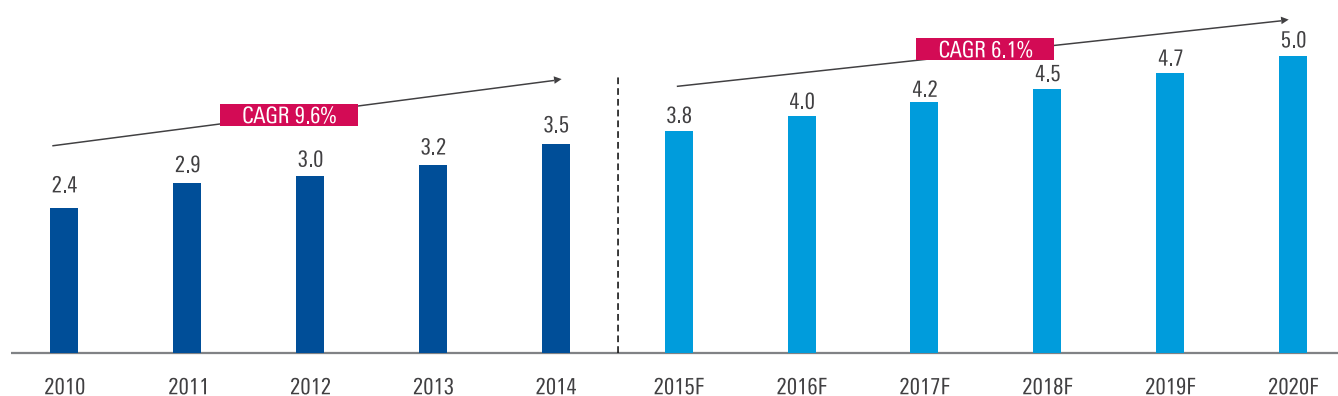
Source: "Global Consulting Market," Consultancy.uk website, <http://www.consultancy.uk/consulting-industry/global-consulting-market>, accessed on 28 September 2015

The services sector is one of the pillars of the Indian economy, accounting for over 50 per cent of India's Gross Value Added (GVA) in 2013–14. According to the Economic Survey 2015–16, consulting services evolved as one of the fastest growing business services in India.⁴ The rapid expansion in Indian business and management consulting industry is fostering the growth of consultancy firms. Thus, employment opportunities in the sector are also increasing. The total number of firms operating in the business and management consultancy industry in

India increased from 54,568 in 2009 to 78,524 in 2014, witnessing a rise in the employee base from 152,620 in 2009 to 213,260 in 2014, at a CAGR of 6.9 per cent.⁵

The annual production turnover of the Indian business and management consulting was estimated to be worth USD3.5 billion in 2014, and is forecasted to reach USD5 billion by 2020 by growing at a CAGR of 6.1 per cent. This is significantly lower than 9.6 per cent CAGR registered during 2010–14.⁵

Business and management consulting production turnover in india (USD billion)



Source: "Euromonitor database," accessed on 07 October 2015

Sources: 3 "Global Consulting Market," Consultancy.uk website, <http://www.consultancy.uk/consulting-industry/global-consulting-market>, accessed on 28 September 2015;

4 "Economic Survey 2015-16," India Budget website, <http://indiabudget.nic.in/es2015-16/echapter-vol2.pdf>, 26 February 2016;

5 "Euromonitor database," accessed on 07 October 2015

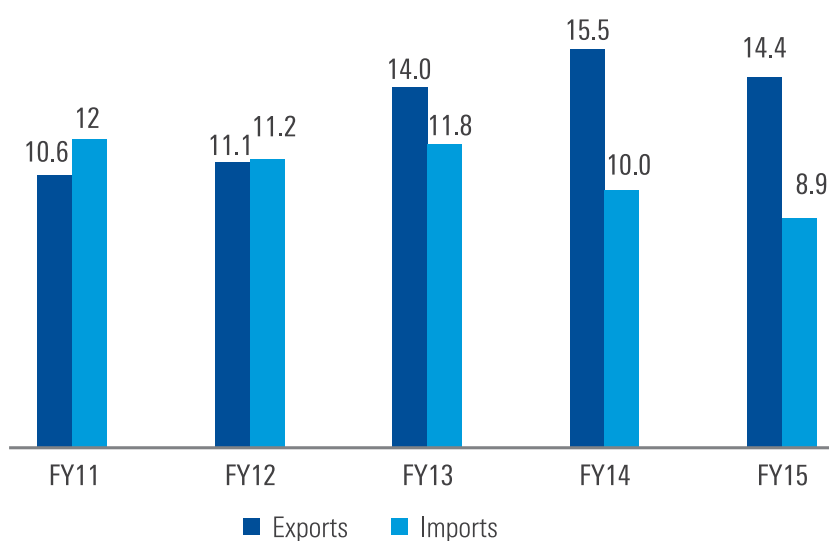
Trade in management consultancy services



India has evolved from being a net importer of professional and management consulting services in FY11- 12 to becoming a net exporter FY13 onwards. The country has registered a net export surplus of approximately USD5.5 billion,

in FY15.⁶The rise in the number of professional and management consulting firms, both domestic and international, and the development of expertise and growing demand, are the primary factors responsible for India's transformation in the sector.

India's trade in professional and management consulting services (USD billion)



Source: "Advance Release Calendar of Balance of Payment," RBI website, https://rbi.org.in/scripts/SDDS_ViewDetails.aspx?SDDSID=209&ID=5, accessed on 28 January 2016



Demand for management consultancy



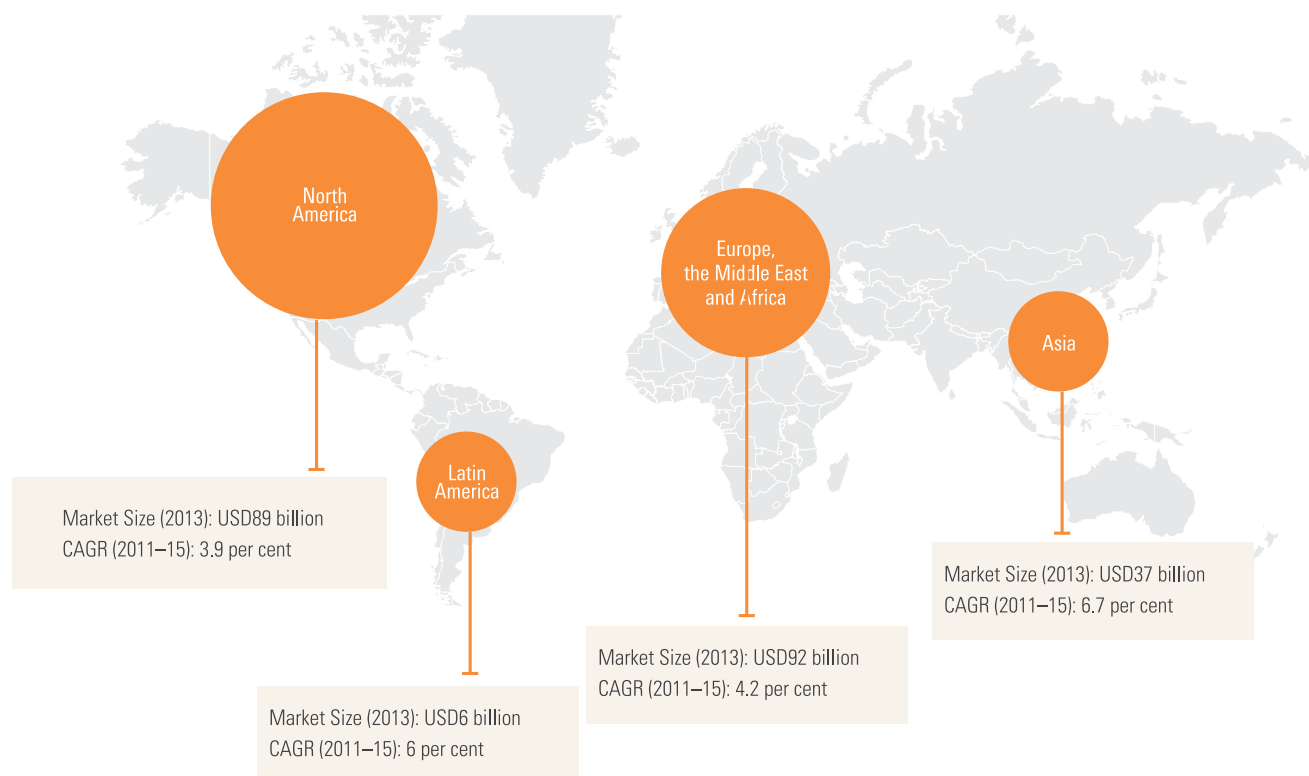
I Global overview

The pursuit for specialised advisory services is rising globally, with firms seeking help from professional third-party consultants in areas such as logistics management, taxation, business and performance development, data warehousing, electronic commerce, risk management, and brand management.⁷

Europe, Middle East and Africa (EMEA) region was identified as the largest consulting region of the world, with a cumulative size of USD92 billion in 2013, followed:

by North America. In terms of expected growth, Latin America and Asia are expected to be major demand drivers for management consultancy services, owing to high economic growth rate of several countries such as Brazil, Mexico, Indonesia, China, Turkey, etc. North America, on the other hand, is expected to grow the least due to its mature business environment. Country-wise, the U.S. is considered as the largest market for management consultancy, followed by the U.K. and Germany.⁸

Potential markets for management consultancy exports²



Source1: KPMG in India Analysis, based on industry observations and discussions, 2015

Sources: 7 "Consulting: Facts and Trends," Careers in business website, <http://careers-in-business.com/consulting/mcfacts.htm>, accessed on 28 September 2015;
8 "Global Consulting Market," Consultancy.uk website, <http://www.consultancy.uk/consulting-industry/global-consulting-market>, accessed on 28 September 2015;

| The Indian scenario

The consultancy services market in India witnessed an average annual growth rate of 14 per cent from 2007 to 2012, with IT services emerging as the fastest growing management consultancy segment. The financial crisis of 2009 acted as a major growth driver for consultancy firms in India as well, as companies approached consultancy firms with the aim of improving efficiency and enhancing revenues.⁹

The increase in demand for such services in India can be gauged by the changing dynamics of recruitment in major consultancy firms in the country. To cater to this growing demand, leading players in the domain aggressively hired fresh talent in 2014 in order to strengthen their consulting divisions.¹⁰ The year also saw India emerge as the fastest growing start-up eco-system in the world, having nearly 3,100 start-ups, which are expected to increase to an estimated 11,500 by 2020. Over 800 new start-ups, led by young, dynamic and well-educated entrepreneurs, set up operations in India, annually.¹¹ These ambitious entrepreneurs could further boost the demand for management consultancy services, owing to the need for knowledge expertise, to compete on a global platform.

| Language skill requirement

Proficiency in English is a must for management consultants. At present, there is also a need to develop linguistic capabilities in European languages such as Spanish, French and Italian. It is also important to develop skills in Mandarin and other languages from developed and emerging economies, for a clear understanding of local documents, processes and procedures, and to be able to communicate better with the clients.

Sources: 9 "Business and management consultancies in India," Euromonitor, October 2013 ;

10 "Consultancy firms hiring aggressively on growing demand," Business Today, <http://www.businesstoday.in/management/career/consultancy-firms-hiring-aggressively-on-growing-demand/story/206753.html>, 30 May 2014;

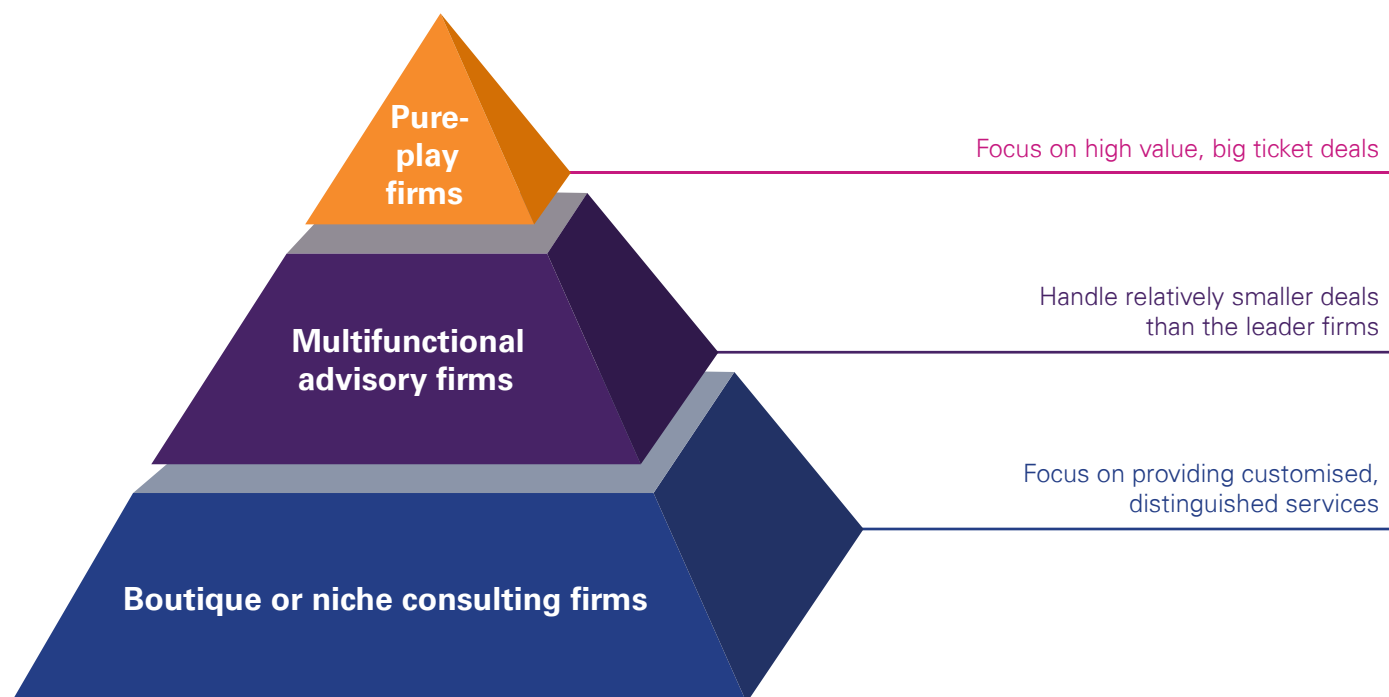
11 "India -The Fastest Growing and 3rd Largest Start-Up Ecosystem Globally: NASSCOM Startup Report 2014," NASSCOM website, <http://www.nasscom.in/india-fastest-growing-and-3rd-largest-startup-ecosystem-globally-nasscom-startup-report-2014>, accessed on 28 September 2015

India's profile in the sector



The Indian consultancy sector started to flourish in 1992, and has now become extremely competitive with the advent of a large number of global and domestic players in the country.

| Management consulting landscape in India

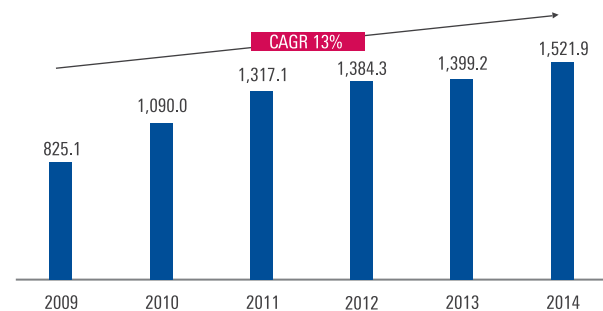


Source: "Ascent of the Advisor," *Business Today*, <http://www.businesstoday.in/magazine/features/financial-investment-consultants-gain-economy-falters-2014/story/204873.html>, 27 April 2014

Business and management consulting exports¹²

In 2014, exports contributed a share of 43 per cent to the Indian business and management consultancy industry revenues. Indian exports in the sector have increased by 84 per cent since 2009 to reach USD1521.9 million in 2014.

Management and business consulting exports (USD million)



Source: "Euromonitor database," accessed on 07 October 2015

Clusters of management consultancy services

The Indian management consultancy industry comprises of several large and small multinational and domestic firms, which are predominantly present in large urban cities (metros and tier I). The National Capital Region, Mumbai (Maharashtra), Bengaluru (Karnataka) and Chennai (Tamil Nadu) are the most favoured regions/clusters for management consultancy firms to offer their services to global as well as domestic clients.¹³



Source: KPMG in India analysis

Availability of skilled workforce: Human resource is the most critical asset required by management consultancy firms. Metro cities offer a vast pool of educated and English-speaking manpower, who are well-suited for management consultancies.

Proximity to domestic clients: These cities are the business hubs of India, which have all the major industries including manufacturing, IT, e-commerce, retail, banking, food processing, etc., providing cross sector business opportunities to management consultancy firms.

Infrastructure facilities: Metro cities provide suitable infrastructure facilities, such as telecom services, high-speed internet facilities, roads and office spaces, which are basic necessities required for smooth operation of a management consultancy firm.

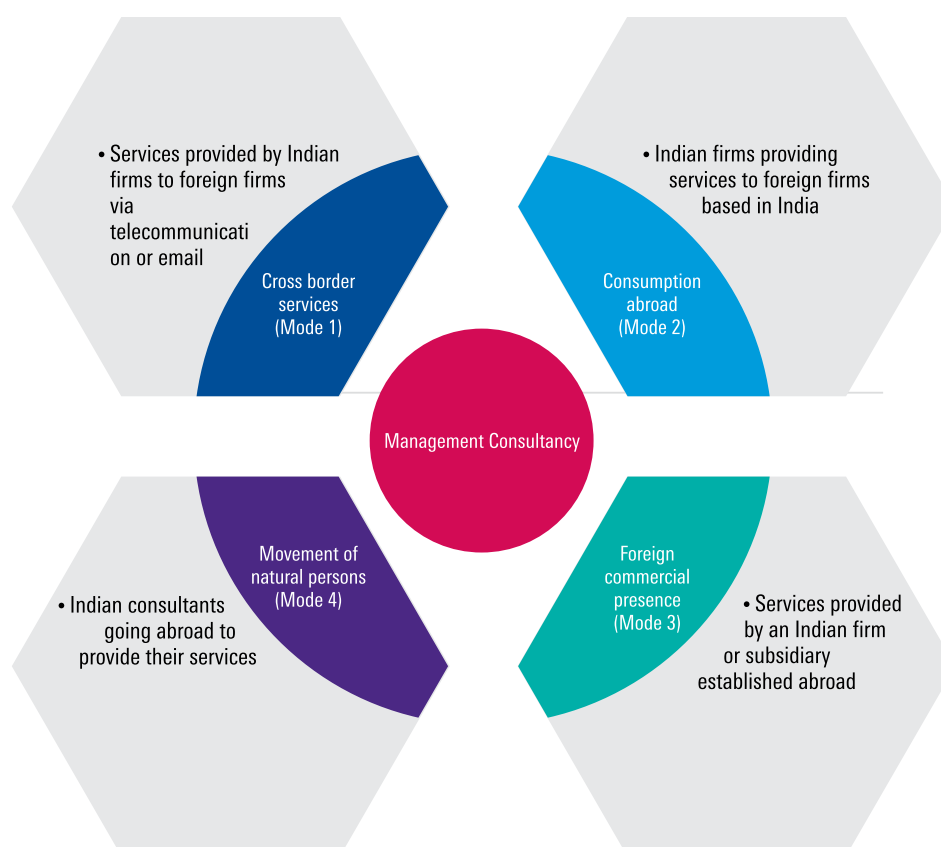
Source: 12 1 "Euromonitor database," accessed on 07 October 2015

13 KPMG in India analysis

I Mode-wise potential

The management consulting services sector serves a wide ambit of sub services, thus all the four modes of service exports (given below) could be employed to cater to foreign clients. However, some modes could prove to be more appropriate for management consultancy service exports.

Modes of management consultancy exports



Source: "The General Agreement on Trade in Services (GATS): objectives, coverage and disciplines, World Trade Organization website, https://www.wto.org/english/tratop_e/serv_e/gatsqa_e.htm, accessed on 05 April 2016

Mode 1, 2 and 4 are the most commonly used channels for management consulting exports, and they involve the following:

Mode 1: Electronic communication mediums, such as telephone, video conferencing and emails, are widely used to deliver consultancy reports and insights to offshore clients.

Mode 2: Relaxation of FDI norms has helped attract many foreign companies to India, across various sectors. Many of these firms enter Indian market through subsidiaries, joint ventures or mergers and acquisitions, and utilise management consultancy services provided by Indian firms.

Mode 4: This mode is a common practice in the IT segment, where consultants are called onshore to provide services pertaining to advisory, data analytics and software management. The Indian government is focussing on increasing management consulting services exports, which can be achieved by promoting official visits of consultants to foreign countries and offering consultancy market access to the least developed countries through Mode 4, in line with the agenda of the World Trade Organisation's Council for Trade in Services meeting held on 5 February 2015.¹⁴

Sources: 14 India promises preferential market access to services suppliers from LDCs, Live Mint, <http://www.livemint.com/Politics/BHG1veHkgZwALY8vMu7FTI/India-promises-preferential-market-access-to-services-suppli.html>, 7 February 2015.

Major challenges in management consulting in India

Inadequate branding and exposure:

While several Indian management consultancy firms have limited presence at the global stage, inadequate promotion of Indian management consultancy capabilities outside the country has also led to restricted global visibility, obstructing the growth of export of services.¹⁵

Competition with local overseas firms:

Foreign management consultancy firms possess the advantage of better market knowledge, advanced technology, presence of skilled labour and global operations, thus creating an entry barrier for Indian firms.¹⁵

Financing issues for small firms:

The Indian management consultancy landscape is characterised by the presence of large numbers of boutique firms (SMEs), which often face challenges in operational and geographical expansion due to the unavailability of adequate funding facilities.¹⁶

Other issues

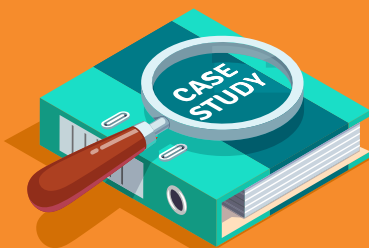
Visa restrictions:

Many countries, such as the U.S. and the U.K., impose stringent visa restrictions on Indian citizens, thereby hindering exports of management consultancy services through Mode 4. The U.S. authorities rejected 56 per cent L-1B visa applications by Indians during 2012 to 2014, which is significantly higher than the 13 per cent average global denial rate for 2012–14.¹⁷

Limited availability of foreign market data:

Indian management consultants often struggle due to the lack of availability of international markets data, which leads to a loss of opportunity for Indian firms. Inadequate data availability also affects the quality of projects delivered to international clients.¹⁵

Case study: A leading management consulting company



- Founded in 1991, the company is one of the leading Indian management consultancy companies.
- Headquartered in Gurgaon, Haryana, the firm offers business strategy advice, start-up assistance, performance enhancement impetus and capital advisory and consumer insights to leading domestic and international clients.
- The firm's service offerings span across sectors such as consumer products, retail, fashion (textiles and apparel), healthcare, hospitality and leisure, food processing, education, and entertainment.
- The company has more than 200 employees and is among the first Indian consulting companies to have a presence in more than 25 countries across the world.

Source: "Technopak company website," <http://www.technopak.com/AboutUs.aspx>, accessed on 09 October 2015 Factors that contributed to its success

Sources: 15 "Services Conclave 2014 report," Ministry of Commerce and Industry, November 2014;

16 "Solve funding issues to finance SMEs growth plans," Business Standard, http://www.business-standard.com/content/budget-2014/solve-funding-issues-to-finance-smes-growth-plans-114070200669_1.html, 02 July 2015;

17 "At 56%, Indians record highest US work visa rejection: Report," The Times of India, <http://timesofindia.indiatimes.com/india/At-56-Indians-record-highest-US-work-visa-rejection-Report/articleshow/46640791.cms>, 21 March 2015

Case study: Factors that contributed to its success

A few factors that helped the company achieve prominence in the global market are:



- Expertise in the textile and e-tailing services: The company developed unparalleled expertise in the textile industry and offers numerous services in this sector, including strategy and planning, factory start-up, industry study, mergers and joint venture assistance, etc., thus becoming a favoured management consultancy for textile services. It's e-tailing expertise in areas such as market and category assessment, consumer insights, devising strategy for private labels, B2B opportunity and start-up assistance, helps the company to engage with several clients seeking support in this sector.
- The firm was proactive in recognising the potential of textile production in Africa. It established offices and operations in Africa to increase its proximity to clients and have a better understanding of the market conditions.
- The firm has attained a strong foothold in the U.S. by offering services to noted textile and apparel companies.
- Besides the U.S. and Africa, the company has also attained strong presence in the U.K., Italy, Dubai, Bangladesh, Pakistan, Sri Lanka, Germany, Australia, France, etc., by delivering diverse projects across sectors.
- The company focusses on increasing global visibility through organising annual events such as the Marketing and Retail Summit (MRS) and the International Textile and Apparel Congress (ITAC).

Source: "KPMG in India analysis

| Promoting the growth of services

The initiatives devised to promote management consultancy services from India have evolved considerably over the last decade.

Past ^{18,19}	Present ²⁰	Future
<ul style="list-style-type: none"> – The Service Export Promotion Council (SEPC) was established in 2006 to promote the export of Indian services (including management consultancy) and to identify new global opportunities. – The Market Development Assistance (MDA) scheme by the Ministry of Commerce and Industry in 2006 was introduced to provide financial assistance to a wide range of export promotion activities implemented by export promotion councils, exporters or trade organisations. – The Market Access Initiative (MAI) scheme was initiated by the government to formulate market specific strategies based on market surveys, and was aimed at increasing the ease of access to international market. – Other government initiatives focussed on promoting consultancy exports, including proactive EXIM policy and EXIM bank schemes. 	<ul style="list-style-type: none"> – Under the Service Exports from India Scheme (SEIS), management consultancy service providers located in India are eligible for duty credit reward of three per cent on net foreign exchange earned, according to the country's Foreign Trade Policy (2015-20). 	<ul style="list-style-type: none"> – Bilateral and multilateral service trade agreements with various nations could help promote management consultancy exports. – The Government of India could expand the scope of the 'Make in India' campaign, and include services sector in its ambit to fast track the export growth rate of management consultancy services.

Sources: 18 Export promotion of consultancy and management services from India report," Ministry of Commerce and Industry, http://commerce.nic.in/trade/export_promotion_cms.pdf, March 2006;

19 "Trade Promotion Programme - Focus", Ministry of Commerce and Industry website, http://commerce.nic.in/trade/international_tpp_cis_5.asp, accessed on 06 October 2015;

20 "Highlights of the foreign trade policy 2015-2020," Ministry of Commerce and Industry, <http://dgft.gov.in/exim/2000/highlight2015.pdf>, accessed on 06 October 2015

Competing with India



Developed countries, such as the U.S., the U.K., Germany, etc., are the leading exporters of management consultancy services in the world. The U.S. is home to several large management consulting multinational firms, contributing a major share to the management consulting exports.

The U.K. has a strong hold in the financial services sector, thus providing it an edge in the financial advisory services.²¹ These nations have developed a business environment, facilitating the growth of management consulting firms, which have expanded globally.

Collectively, these developed nations account for a lion's share of trade in professional services as they are well known for their consulting practices. On the other hand, some developing nations (mostly in Asia and Eastern Europe) are also gaining prominence in the export of professional services, albeit services that are towards the lower end of the value chain.^{22, 23}

| Global practices^{24, 25}

Favourable practices adopted by competing nations include:

- Government support in the form of export promotion councils, financial aid or export promotion initiatives such as the National Export Initiative in the U.S.
- Conducting research to understand overseas markets, gain market knowledge and identifying new opportunities
- Effective use of digital media, technology and skilled human resource to provide services through Mode 1 and Mode 4
- Strong global presence of management consulting firms headquartered in countries such as the U.S. and the U.K., through affiliates or subsidiaries

Sources: 21 "UK world's top exporter of financial services," *Economia* website, <http://economia.icaew.com/news/july-2015/uk-is-leading-exporter-of-financial-services>, 22 July 2015;

22 "US Statistics database," accessed on 23 November 2015;

23 "Eurostat database," accessed on 23 November 2015;

24 "UKTI international trade services for exporters," UK government website, <https://www.gov.uk/government/collections/uk-trade-and-investment-services-for-exporters>, accessed on 06 October 2015 ;

25 "NEXT," U.S. Trade Promotion Coordinating Committee & Export Promotion Cabinet, <http://www.trade.gov/neinext/neinext-strategic-framework.pdf>, 13 May 2014

Sector strengths and opportunities



Strengths

- Indian firms offer low-cost management consultancy services
- Management consultancy firms in India serve as a singular destination for clients, owing to diverse capabilities, which assist them in fulfilling varied clients' requirements
- Availability of a large, educated and skilled labour pool can adequately cater to the human capital needs of the sector

Opportunities

- Liberalisation of the FDI policy, along with the government's 'Make in India' campaign, is expected to attract foreign firms to set up manufacturing units in India, requiring third-party management consultancy services
- India is the fastest-growing nation of start-ups in the world. These firms may require management consulting services for expansion in India and abroad²⁶
- Bilateral and multilateral service trade agreements with developing countries could surge the export growth rate of management consultancy services

Source: KPMG in India analysis

I Mandatory skills

Human capital is perhaps the single-largest asset for any management consultancy firm, and the management consultancy sector is among the leading employers of MBA and college graduates. The following technical and professional skills are essential for the industry^{27, 28}:

Technical skills

- Data warehousing
- Database management and working proficiency
- Brand management
- Value management
- Supply chain and logistics management
- Client server development

Domain specific requirements for

- IT professionals
- Bankers
- E-commerce experts
- Healthcare experts

Soft skills

- Communication skills
- Analytical skills
- Presentation skills
- Commercial awareness

Sources: 26 "India fourth largest start-up hub in world: Economic Survey 2015," *The Financial Express*, <http://www.financialexpress.com/article/companies/india-fourth-largest-start-up-hub-in-world-economic-survey-2015/48377/>, 27 February 2015;

27 "Skill sets graduates must have to attract employers," *The Times of India*, <http://timesofindia.indiatimes.com/life-style/relationships/work/Skill-sets-graduates-must-have-to-attract-employers/articleshow/48649452.cms>, 24 August 2015;

28 "Consulting: Facts and Trends," *Careers in business website*, <http://careers-in-business.com/consulting/mcfacts.htm>, accessed on 28 September 2015

Enhancing export of services from India



I Assistance to Indian firm

The following steps will help Indian firms in capturing a large share of the global market.

Dedicated export agency	>	A nodal agency dedicated to the promotion of management consultancy services can be created for services offered by Indian firms. The agency can assist in structuring export promotion activities, thus increasing their effectiveness. This agency could also act as a link between Indian firms and prospective clients overseas.
Skills development	>	A skills development action plan can be developed under a public-private partnership model, with an aim to build human capital, which is necessary to tap global opportunities. Under this, efforts should be channelised to develop technical as well as soft skills, as they are crucial for providing services in foreign countries.
Adoption of advanced IT infrastructure	>	Indian consultancy firms need to be at par with international technological standards, so as to be competitive at the global stage. Government programmes could be initiated to assist firms (especially smaller ones) to adopt up-to-date technology, which in turn could help in client acquisition in India and overseas.
Financial assistance	>	Financial assistance schemes could also be established to foster expansion of Indian firms in other geographies. Under this, the Government of India could provide loans and tax exemptions to small and medium enterprises for opening offices in foreign locations.

I Approaching international markets

The following measures could help improve the ease of approach to international markets:

- Conducting market research and surveys, to develop international market knowledge across sectors and to identify newer opportunities
- Developing bilateral and multilateral trade agreements, to promote export of management consultancy services from India
- Setting-up of trade establishments in high potential countries, to provide support to Indian management consultancy firms in opening offices, legal requirements, promotion of services and identifying scope for new business opportunities
- Increasing visibility of Indian management consultancy firms by conducting and participating in international events

Regulatory architecture



| Accreditations

- Certified Management Consultant (CMC) certificate by the Institute of Management Consultants of India, for setting global standards of consultancy in India²⁹

| Regulators

- Ministry of Commerce and Industry
- Service Export Promotion Council

| Relevant Acts:

- Foreign Trade Policy, 2015-20
- Finance Act, 1994
- Indian Companies Act, 1956
- Companies Act, 2013

Sources: 29 "Certified Management Consultant," IMCI website," <http://www.imcindia.co.in/about-us>, accessed on 28 September 2015

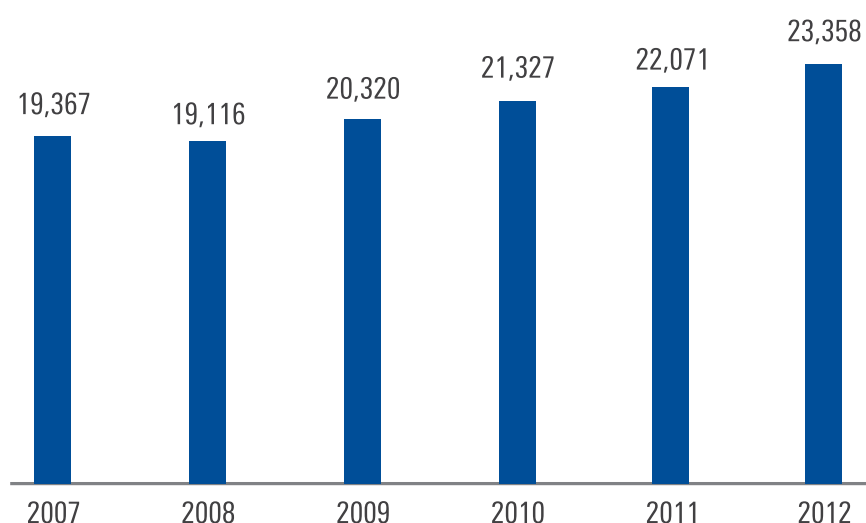
Small and medium enterprises in the sector



Small and Medium Enterprises (SMEs) form an important part of the Indian management consulting space. SMEs, generally known as boutique consulting firms or niche firms, are often approached by high value clients for their ability to deliver customised and distinguished services. These firms charge less than the top management consulting firms, providing a cost-effective service to clients.³⁰ Corporate strategy, professional management, and agility can enable SMEs to serve varied and widespread client base in India.

India's growing economy and the wide scope of opportunities has attracted several multinational SMEs to set up offices in India.³¹

Number of management consultancy MSMEs, 2007-12



Note: Companies with less than 500 employees are considered as MSMEs

Source: "Business and management consultancies in India report," Euromonitor International, October 2013

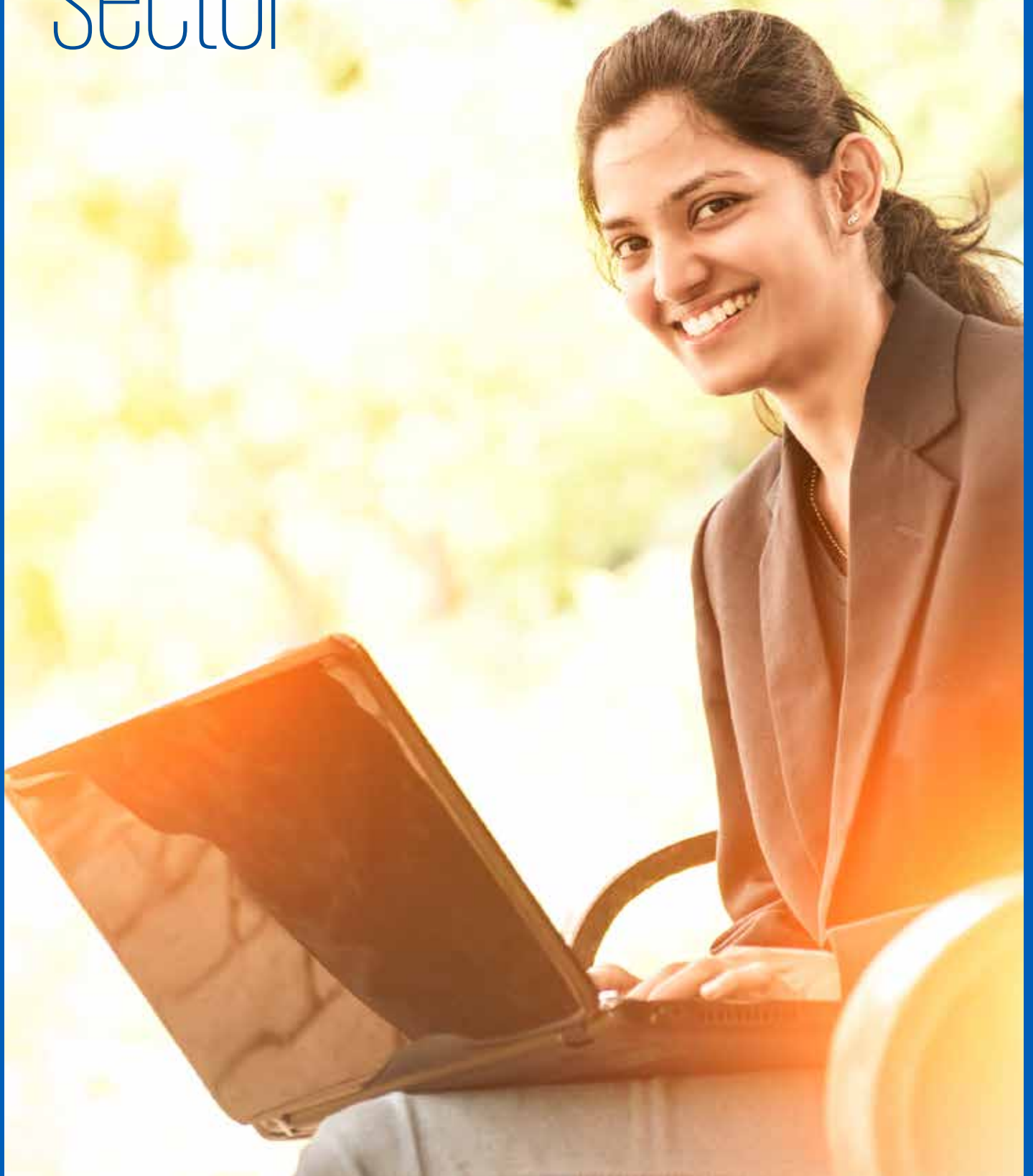
With assistance from the government in the form of export promotion of SMEs, and financial support, these SMEs can make their mark on the global consulting market by showcasing their potential and capabilities, and gaining their due visibility.

Sources: 30 "Boutique consultancy: Small is big innovation," Live Mint, <http://www.livemint.com/Consumer/OA4XEgTgceUp2o0I7cF0pL/Boutique-consultancy-Small-is-big-innovation.html>, 06 January 2008;

31 "Cosy around the middle," Business Today, <http://www.businesstoday.in/magazine/features/medium-sized-global-consulting-accounting-firms/story/194285.html>, 12 May 2015



The education sector



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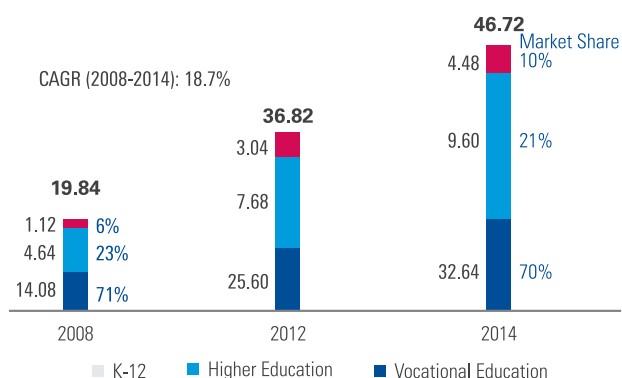
Education sector overview¹



India has the largest population in the world in the age group of 0–24 years (approximately 600 million). About 60 per cent of this population is in the age group of 0–14 years (K12 segment). While universal access to school education has been achieved with 96 per cent enrollment in the age group of 6–14 years, the dropout rates are significantly high with nearly half of the students dropping out of schools by the tenth standard.

The quality of school education measured by key learning outcomes remains poor as per the latest Annual Status of Education Report (ASER) in 2014. There is an acute shortage of teachers in the K12 segment, with an estimated vacancy of about five hundred thousand positions. In higher education, the Gross Enrollment Ratio (GER) is at 18 per cent, and way below the targeted 30 per cent by 2020. The quality of higher education could also be improved significantly – evidenced by the very few globally ranked institutions in India. With an expected population of 1.4 billion by 2022, India is expected to have approximately 63 per cent individuals in the working age group (15–59 years). Hence, there is a continued emphasis on skill development that is aligned with the ‘Make in India’ initiative. India has the potential to become the skills capital of the world.

Market size of education and skill development sub-segments (USD billion)



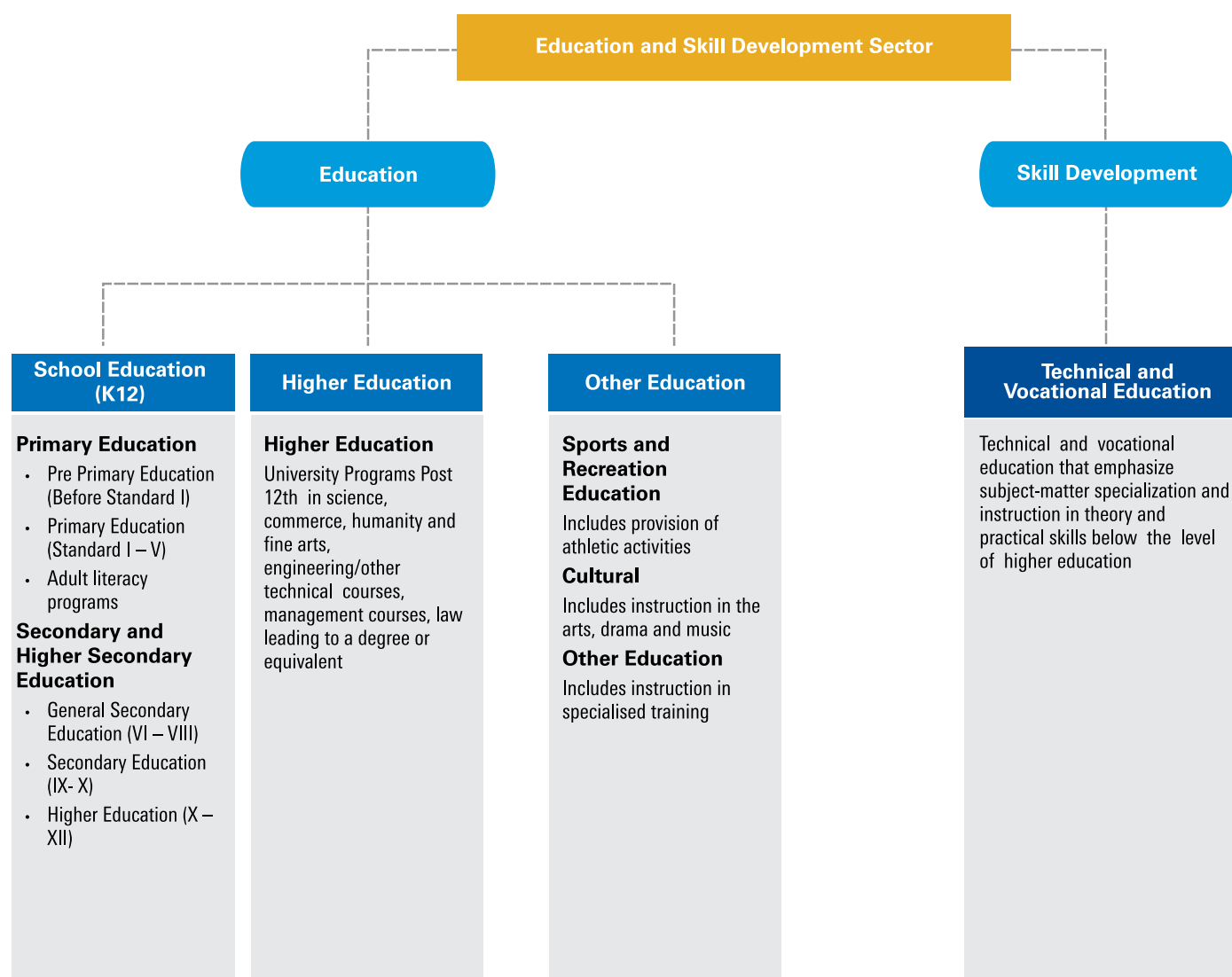
Source: ‘Education Sector in India: A Snap Shot’ KPMG Presentation at MIT Enterprise Forum, KPMG India, 20 April 2011

Definition of market size: It includes the tuition fee for each segment of the industry. For schooling, it also covers the fees spent on textbooks and multimedia used in classroom teaching. The market size of colleges/higher education includes the tuition fee for courses in engineering, medical and MBA streams

CAGR (2008–14)	
K12	13%
Higher Education	11%
Vocational Education	22%
Overall	13%

Source: ‘Education Sector in India: A Snap Shot’ KPMG Presentation at MIT Enterprise Forum, KPMG India, 20 April 2011

| Sector overview – sub-sectors of education and skill development sector^{2,3,4}



School education

There are over 15 lakh schools in India, with approximately 67 per cent concentrated on primary education

The share of government-managed schools is approximately 79 per cent.

Higher education

From 350 universities and 16,982 colleges in FY06, the numbers have increased to 757 universities, 38,056 colleges and 3,694 polytechnics in FY15

Source: National Industrial Classification 2008, Central Statistical Organisation, Ministry of Statistics and Programme Implementation

Source: 2 National Industrial Classification 2008, Central Statistical Organisation, Ministry of Statistics and Programme Implementation

3 Government of India, Economic Survey 2015-16

4 KPMG in India's analysis, 2015

| Sector overview — Key emerging trends⁵

Overall Model/ Policy/ Ecosystem



School Education

- Huge demand in urban micro markets is driving private sector interest in schooling
- Benchmarking studies such as PISA (international) and ASER (Indian) are putting the spotlight on quality of schooling education and its need to improve

Higher Education

- Global mobility - Increasing affordability and willingness to spend on overseas higher education

Vocational Education

- National Skills Development Mission is likely to create a widespread positive impact on the skills ecosystem in India over the next 3-5 years

Curriculum, Assessment and Certification



School Education

- International boards like International Baccalaureate have increased schools for the upper middle class with global aspirations (about 3.5 times since 2006)
- Impact of CCE and CBSE system has led many school administrators and teachers to undergo re-skilling

Higher Education

- Policy innovations like meta-universities have the potential to increase the breadth of courses that could be on offer

Vocational Education

- Sector Skill Councils, established with the support of NSDC are creating National Occupational Standards which help to standardize curriculum for the training sector

Content



School Education

- Players from diverse backgrounds such as media, internet companies, mobile phone platform providers, etc. could look at adjacencies in the schooling content space
- Content creators and allied manpower roles could become increasingly important

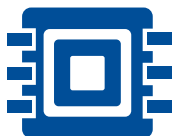
Higher Education

- Pedagogical Innovations like Massive Online Open Courses (MOOCs) offered even by Ivy League universities are challenging the value of content in the education value chain

Vocational Education

- There is an increased focus towards multimedia content
- Content especially for soft skills training are increasingly geared for development in a multimedia mode

Delivery



School Education

- Increased adoption of ICT and Multimedia tools in private and public schools alike
- Huge future potential for 'informal' learning and flipped classroom models that could have implications for the manpower requirements and skills required in the sector

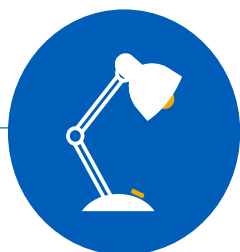
Higher Education

- Technology is likely to play an increasingly important role in delivery, accentuated by the fact that there is a severe lack of quality faculty

Vocational Education

- Innovative training models such as mobile training centers, multi-skill development centres, etc. are likely to increase in the future

Sector overview – Demand side assessment⁶



School education:

- Rising disposable income of Indian population – The number of households earning an annual income of INR2–5 lakh (INR0.2–0.5 million) is expected to increase eight times by 2025.
- Increase in the population in the target age groups – the number of people in the age group 6–17 is expected to increase from 308 million in 2012 to 346 million in 2022.

Higher education:

- Increasing population in the age group of 15–24 years.
 - It is estimated that approximately 50 per cent (117 million) of the total population in the educational age group (15–24) belongs to this category.

Vocational training: Increasing awareness among Indian employers and population

- NSDC's set-up and progress have created an ecosystem for increased awareness and thrust toward skill development among both government and private sector employers and the Indian population.
- Set up of the National Skills Qualifications Framework (NSQF) under National Skills Development Agency (NSDA) is expected to facilitate increased adoption of skill development programmes.

Sector overview – Supply side drivers⁶



School education:

- Increasing government impetus in the successive plans for five years
 - The expansion of Sarva Shiksha Abhiyan as a vehicle of universal elementary education
 - The extension of the Mid-Day Meal Scheme and enactment of the RTE Act, 2009
 - The establishment of the Rashtriya Madhyamik Shiksha Abhiyan (RMSA) to enhance access to secondary school education.
- Increasing private sector participation – the share of privately managed schools has increased from 19 per cent in FY08 to 25 per cent in FY14.

Higher education:

- Government impetus: The Central government's expenditure on higher education has increased from 13.5 per cent of the total expenditure on education by Ministry of Human Resource Development (MHRD) in FY08 to 20 per cent in FY13
 - Rashtriya Uchchatar Shiksha Abhiyan (RUSA), conceptualised in September 2013, is likely to form a major component of higher education reform in India for the 12th Five Year Plan
- Private sector participation: Between 2010 and 2013, private sector deals in higher education amounted to USD228 million.

Vocational training:

- Increasing private sector participation
 - The establishment of NSDC that is spearheading private sector initiatives in skill development
 - Of the USD1 billion that was invested in education over the three years from 2010 to 2013, about 10 per cent of this total investment was in vocational training

India's profile in the sector



India's profile in the sector – value chain⁷

1	Curriculum	The curriculum is usually developed by regulatory bodies, be it the Centre or state boards for school education or the universities for higher education. In India, curriculum for unregulated institutes, such as private vocational training, is designed by the institutes themselves.
2	Content	Content development is closely linked to the curriculum and includes the development of syllabus, subject, course material, exam patterns, etc. The regulatory authorities in school education usually develop the content that could be used as a guidance for further customisation by the schools.
3	Delivery	The use of technology, on-field study, interactive discussions, etc., are used as appropriate delivery modes for teaching the course. For higher education, exchange programmes and research assignments are offered
4	Assessment	Assessment includes conducting examinations and evaluating the performance of the students through various ways. This could be school or national level examinations on an annual basis, or quarterly practical and theory assessment of higher education students.
5	Certification	Upon successful completion of the programme, students are certified by affiliated boards or universities

India's profile in the sector – technology as a game-changer⁷

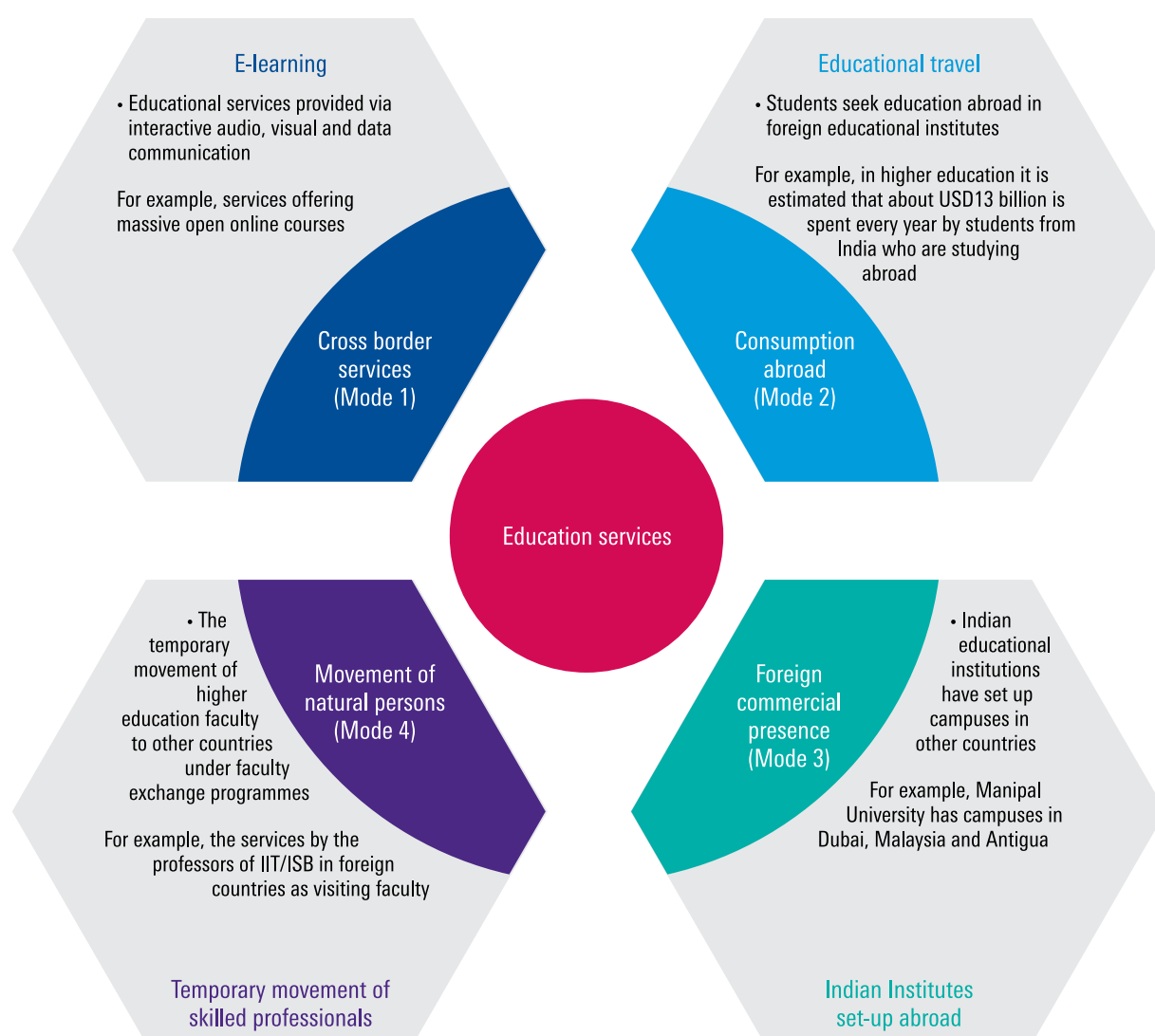
Technology could be a game-changer in the field of education. It could be leveraged for bringing about innovative delivery mechanisms.

- Digitisation is a mega trend in the delivery of education, and is required to take the courses to students around the world

- MOOCs could provide easy access to high quality education in living rooms
- Students could collaborate on digital platforms to share their knowledge and even assessment could be managed online
- Faculty in Indian institutes could teach using technology platforms from their base locations

I India's profile in the sector – Mode-wise potential⁸

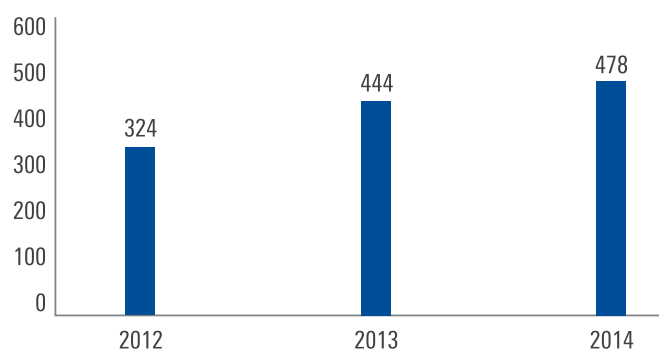
Education services have seen rapid globalisation as reflected in the growing number of students travelling across international borders for study and the rapid growth in Information Technology platforms providing online learning around the globe. The General Agreement on Trade in Services (GATS) defines trade in services as the supply of a service through any of the four ways: mode 1: cross-border services; mode 2: consumption abroad; mode 3: commercial presence; and, mode 4: the movement of education professionals.



Source: World Trade Organization Website, accessed 20 January 2016 https://www.wto.org/english/tratop_e/serv_e/cbt_course_e/c1s3p1_e.htm

India's profile in the sector – exports of educational services⁹

Exports of educational services (USD million)



Source: UN WTO Statistics on services trade, <https://i-tip.wto.org/services/>, accessed 08 February 2016.

India has been an attractive destination for foreign students, primarily from South and Southeast Asia, West Asia and Africa. The better quality of education in the English language, and lower cost compared to other developing and developed countries are key drivers for the growth in the inflow of foreign students into India.

There is also a significant demand for vocational education, especially from India's neighbouring countries in South Asia. Considering the linguistic commonality and the ease of movement between India and its neighbours, such as Bangladesh, Nepal and Bhutan, there is a significant potential for vocational and professional training courses to be provided for the nationals of these countries.

In addition, the demand for higher education services due to a paucity of institutions for higher education, as well as the growing willingness to pay a premium for quality education, makes India a significant potential market for foreign universities to enter into.

The cost arbitrage and available manpower in this sector, with more than 10 million employed professionals⁷, also provides foreign educational institutions and businesses involved in this sector an opportunity to provide low cost e-learning services, globally.

India's profile in the sector – potential markets¹⁰

Education has played an important role in India's relationship with a number of Southeast Asian countries, particularly Malaysia, Thailand and Singapore. This could be expanded to other countries in the region. A large number of Indian teachers teach in Brunei and this has the potential to build an educational connect with the Philippines and Indonesia. In addition, other developing and growing economies in Southeast Asian countries, such as Vietnam, Laos and Cambodia, offer a huge potential market for educational services, especially given the close ties between India and these countries.

Central Asia is another region with which India has had strong civilisational and cultural links, due of the traditional links and the respect that India enjoys in Kazakhstan, Tajikistan and Kyrgyzstan in the field of education.

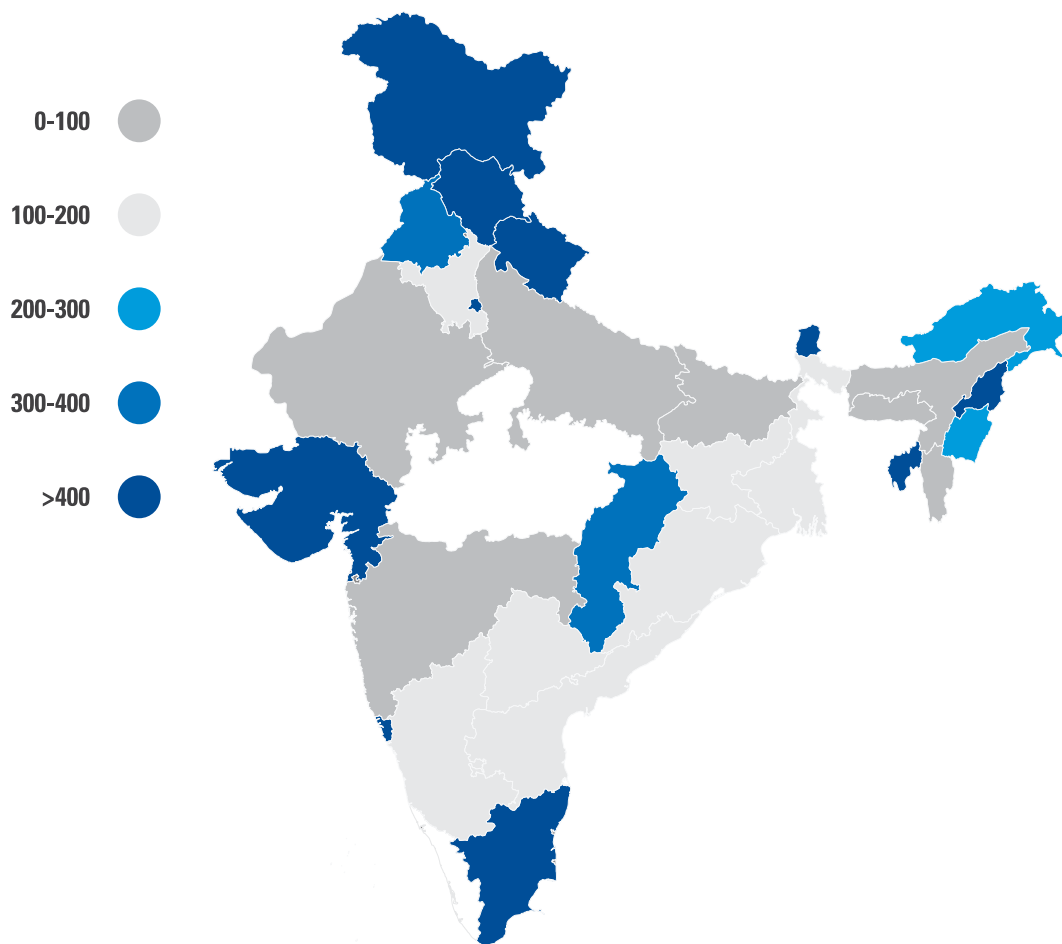
For web-based services, such as online training, India is an attractive market for content generation services for the U.S., as well as countries in the European Union.

Source: 9 UN WTO Statistics on services trade, <https://i-tip.wto.org/services/>, accessed 08 February 2016

10 KPMG in India's analysis, 2015

India's profile in the sector – key clusters of government spends on education¹¹

Capital expenditure by state governments on education, sports and culture in INR per person among students (0–24 years) in FY14



Source: State Budget Finances, Budgeted Estimates (FY14), RBI <https://www.rbi.org.in/scripts/AnnualPublications.aspx?head=State%20Finances%20:%20A%20Study%20of%20Budgets>

- In FY14, the total state capital expenditure on education was USD1.7 billion.¹²
- Tamil Nadu had the highest share in the expenditure of about 12 per cent, followed by Uttar Pradesh with a contribution of 8.67 per cent and Gujarat with 6.67 per cent.¹²
- In terms of per student investment in education, Sikkim and Goa spent more than USD32 and Tamil Nadu spent about USD12. Rajasthan and Madhya Pradesh spent as low as USD0.5.¹²

Sources: 11 KPMG in India's analysis, 2015

12 State Budget Finances, Budgeted Estimates (FY14), RBI <https://www.rbi.org.in/scripts/AnnualPublications.aspx?head=State%20Finances%20:%20A%20Study%20of%20Budgets>

| India's profile in the sector – strategies to promote growth¹³

Sector	Government initiatives
K12	<ul style="list-style-type: none"> – Implementation of the Right to Education Act – To ensure that there is a senior secondary school within 5km reach of a child, upgrades of over 80,000 secondary schools and add/upgrades of 75,000 junior/middle schools – Enhancing allocations to Integrated Child Development Scheme (ICDS) by USD25 million and Integrated Child Protection Scheme (ICPS) by USD8 million.
Higher education	<ul style="list-style-type: none"> – Constituted the Student Financial Aid Authority to administer and monitor scholarship as well educational loan schemes through the Pradhan Mantri Vidya Lakshmi Karyakram – USD25 million has been set apart for Deen Dayal Upadhyay Gramin Kaushal Yojana to improve the employability of rural youth Atal Innovation Mission – an innovation promotion platform, involving academics, entrepreneurs and researchers, draws upon national and international experiences to foster a culture of innovation, Research and Development in India – Setting up of 30 central establishments, one in each of the 16 states that do not have a Central university at present, and 14 other Central universities in different parts of the country – The establishment of new IITs across India, two IIMs and six AIIMS in the General Budget 2014 and 2015 – The Foreign Education Bill that is under consideration might allow foreign universities to establish campuses in India is being discussed upon
Vocational	<ul style="list-style-type: none"> – National Skills Mission could consolidate skill initiatives spread across several ministries and allow standardisation of procedures across 31 Sector Skill Councils – Established National Skill Development Centre (NSDC) with a mandate to develop the skill of 30 per cent of the overall target of 500 million people by the year 2022

Source: '13 Over 2 pc cut in education budget; new IITs, IIMs to be set up', Financial Express, March 2015

<http://www.financialexpress.com/article/economy/budget-2015-over-2-pc-cut-in-education-budget-new-iits-iims-to-be-set-up/49169/>; Ministry of Women and Child Development, accessed 20 January 2016 <http://wcd.nic.in/sites/default/files/OUTCOME%20BUDGET%202015-16Eng.pdf>; Government of India launches 'Vidya Lakshmi' portal; Education loans easier to grab now, India Today, 21 August 2015, <http://indiatoday.intoday.in/education/story/education-loans-students/1/460063.html>; Press Information Bureau, Government of India, February 2015, <http://pib.nic.in/newsite/PrintRelease.aspx?relid=116186>; Industry upbeat over National Skills Mission, The Economic Times; March 2015 http://articles.economictimes.indiatimes.com/2015-03-02/news/59683987_1_national-skill-development-corporation-31-sector-skill-councils-monetary-reward-scheme

Demand



| Demand for educational services – language requirements¹⁴

School education	<ul style="list-style-type: none"> – About 90 per cent of the schools are affiliated to state boards and predominantly use the local language of the state for delivering education. – Private schools use English as the language of instruction at both the primary and secondary levels. This provides an opportunity for setting up centres of excellence for exports of services.
Higher education	<ul style="list-style-type: none"> – English is the predominant language of instruction. This provides a significant advantage to India for possible creation of centres of excellence.
Vocational education	<ul style="list-style-type: none"> – Local language is likely to be the predominant mode of instruction. Vocational education in South Asian Association for Regional Cooperation (SAARC) languages such as Nepali, Bhutanese and Sinhalese should also be provided, given the demand for training in the SAARC countries and the cross movement of labour across many of the SAARC countries.

Competition



| Competition to India – enhancing education exports from India¹⁵

Focus areas for India to achieve prominence in exports of education services.

- India could attract foreign students to study in India
- Streamlining and simplifying immigration processes for students
- Work in tandem with the private sector to provide industry-relevant education for the world
- Setting up a marketing and promotion body to promote the country's universities
- Investing in niche areas of study and executive education
- Attracting foreign universities to set up campuses in India.

Faculty is a key differentiator for India to emerge as a centre of excellence in education.

Sector strengths and opportunities¹⁶



Strength

- Government initiatives in the establishment of national council on teachers' education to improve the quality of teachers in school education.
- Increased private sector participation in secondary and higher education could lead to improved quality of services.
- India, due to its favourable demography, has a large pool of graduates who could be trained to become teachers.

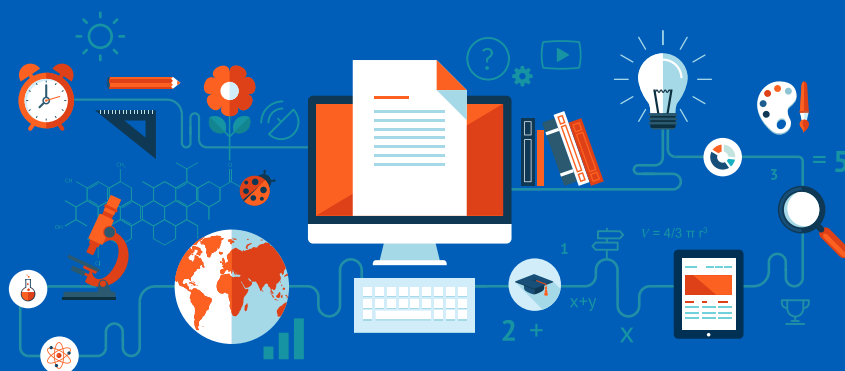
Opportunities

- Private sector participation in vocational training seems to show some progress in the quality of training delivered and the skills imparted to students.
- With increased enrolment ratio across various segments of education and skill development, there is likely to be an increased demand for good quality teachers.
- With the Right to Education Act, there is a conscious effort to maintain the student-teacher ratio and the demand for teachers is more than ever before.
- The demographic dividend of India could mean a larger number of students need to access schools, colleges and universities, thus driving the demand for teachers.

Skills required¹⁵

- New teaching methods: The faculty could be re-skilled in newer pedagogical methods that leverage technology. The teaching quality could be improved further and teacher training institutes could be nurtured for achieving this objective.
- Academic research skills: Promote academic research skills with incentives for faculty to conduct research.
- Soft skills: Promotion of soft skills that the faculty could gain through by consulting projects in the industry.
- Additional skills are expected from faculty apart from technical skills (subject knowledge, scope of knowledge) that may be required for teaching and research; this includes fund raising (through research, etc.) and institution building.

Regulatory architecture¹⁷



Right of Children to Free and Compulsory Education Act, 2009 (also known as Right to Education Act)

The RTE Act has important implications on the quality of teachers and their employment in schools:

- The Central government is expected to develop and enforce standards for training teachers.
- Persons possessing minimum qualifications, as prescribed by an academic authority authorised by the Central government, would be eligible to be employed as teachers.
- Existing teachers not possessing such prescribed qualifications would be required to acquire this qualification within a period of five years.
- The government could ensure that the pupil–teacher ratio specified in the schedule is maintained in each school.
- Vacancy of a teacher in a school, established, owned, controlled or substantially financed by the government, is not expected to exceed 10 per cent of the sanctioned strength.

National Council for Teacher Education (NCTE) Act, 1983

- The Act considers the National Council for Teacher Education as a statutory body of the Central government, responsible for planning and coordinating the development of teacher education in the country
- The NCTE lays down norms and standards for various teacher education courses, minimum qualifications for teacher educators, course and content duration, and minimum qualification for the entry of students and teachers for the various courses
- It also grants recognition to institutions (government, government-aided and self-financing) interested in undertaking such courses, and has an in-built mechanism to regulate and monitor their standards and quality.

National Mission on Education through Information, Communication and Technology (ICT)

- The mission was launched in 2008 with an initial budget of INR502 crore to enhance the use of technology in all segments of the education sector. Some of its objectives include spreading digital literacy for teacher empowerment; experimentation and field trial in the area of performance optimisation of low cost access/devices for use of ICT in education; and providing support for the creation of virtual technological universities
- The mission is expected to also work for scaling up of the existing education helpline – One Stop Education Portal – SAKSHAT. The helpline was set up to take care of the needs of the entire learning community, including the students enrolled in various educational institutions and lifelong learners by extensively utilising e-learning concepts and the ICT-based methodology.

National Assessment and Accreditation Council (NAAC)	<ul style="list-style-type: none"> – NAAC lays special emphasis on evaluating the quality of higher education in India – Under the new methodology introduced by NAAC with effect from 1 April 2007, the higher education institutions are assessed and accredited by a two-step approach. <ul style="list-style-type: none"> - In the first step, the institution is required to seek 'Institutional Eligibility for Quality Assessment (IEQA)' - The second step is the assessment and accreditation of the institute under the grades 'A', 'B', 'C' for accredited institutions; and 'D' for those that are not accredited. NAAC has identified seven criteria – i. Curricular aspects, ii. Teaching–learning and evaluation, iii. Research, consultancy and extension, iv. Infrastructure and learning resources, v. Student support and progression, vi. Governance and leadership, and vii. Innovative practices as the basis for its assessment procedure
National Policy on Skill Development	<ul style="list-style-type: none"> – This mission empowers individuals through improved skills, knowledge, nationally and internationally recognised qualifications to gain access to decent employment and ensure India's competitiveness in the global market. It has a target to skill 500 million people in the labour force by 2022.
National Council for Vocational Training and State Council for Vocational Training	<ul style="list-style-type: none"> – NCVT is to be a central agency for coordinating the training programmes in the country, bringing about uniformity of standards and awarding certificates of proficiency in craftsmanship on an all-India basis. The state councils have been established to assist the National Council.

Although there is a universal value chain for the entire sector, the institutional framework across the value chain may differ among the sub-sectors

- School and higher education fall under the purview of the Ministry of Human Resource Development (MHRD).
- Schooling is regulated by the state boards, ICSE, CBSE and other international boards.
- Higher education institutes are governed by a single body, the University Grants Commission (UGC).
- All India Council for Technical Education (AICTE) is the statutory body and a national-level council for technical education, under the Department of Higher Education, Ministry of Human Resource Development.
- Non-regulated channels are the pre-schools, day care centres, which form a relatively small part of the education sector.
- Vocational education and training falls under both regulated (ITIs/ITCs under the Ministry of Labour, polytechnics under MHRD) as well as unregulated segments (private training schools).

Regulations governing foreign educational institutions

In India, foreign educational institutions (FEIs) can offer only conventional modes of education, and not distance education. FEIs fall under the ambit of the University Grants Commission (UGC) and have to follow the following regulations:

- Promotion and maintenance of standards of academic collaboration between Indian and Foreign Educational Institutions Regulations 2012
- Operation of Campuses of Foreign Education Institutions Regulations 2013.

FEIs are required to be among the top-500 institutions as ranked by only two specified ranking methods: the Times Higher Education Supplement (THES) or the Academic Ranking published by the Center for World-Class Universities (CWCU) of Shanghai Jiao Tong University. Private domestic institutions are required to have accreditation from the National Assessment and Accreditation Council (NAAC).

Mode-wise recommendations¹⁸



According to the WTO database on services trade, India saw an outflow of USD2.4 billion in 2014 in terms of the expenditure by Indian students abroad. About 200,000 Indians go abroad to study annually¹⁸, which not only indicates the significant pressure on India's foreign exchange reserves, but also implies that there is a high opportunity for foreign universities to set up campuses in India.

The globalisation of higher education services could help not only reduce the outflow of foreign exchange but also help transform higher education as a net earner of foreign exchange.

| Mode 1

- **Recognition:** The advent of Massive Open Online Courses (MOOCs) provide a significant opportunity in the cross-border supply of education services. However, unlike the open universities in the U.S. and the U.K., the evaluation techniques for online/correspondence courses offered by Indian institutes are not equivalent to the ones applied for regular courses. In addition, the Distance Education Council, the regulator for Online Distance Learning (ODL) could look at Indira Gandhi National Open University's experience in getting courses recognised internationally.
- **Infrastructure:** Improvement in digital infrastructure in the education sector, specifically high-quality internet connectivity, video conferencing and staff training, could be promoted.

| Mode 2

- **Regulatory framework:** More clarity in the rules and regulations governing foreign educational institutions in India is desired. The thrust of the present regulations is on curbing malpractices. However, to encourage foreign universities to set up base in India, a balance is needed between safeguarding the interests of students and providing adequate flexibility to such universities in setting the syllabus, hiring teachers, screening students and deciding the fee structure.
- **Twinning programmes:** Norms for twinning programmes and internationally compatible credit systems are required. Twinning programmes promote student mobility and are much cheaper than pursuing degrees abroad.
- **Opening up intake of foreign students:** The UGC has recommended a 15 per cent intake of foreign students over and above the sanctioned seats in educational institutions. This limit could be further relaxed, given the excess capacity in many technical and professional institutions in many states in India.
- **Transparency:** The regulator could mandate that all educational institutions beyond a certain threshold limit, could publish updated basic information, such as number of seats sanctioned, admission criteria and fee structure on their website. A pilot programme could be implemented with interested institutions implementing this on a voluntary basis.
- **Nodal agency:** The creation of a nodal agency, which may be a consortium of select universities, could act as a knowledge centre about the information on education opportunities in India, and also help Indian universities interested in setting up campuses abroad with the necessary requirements and approvals. This

Source: 18 KPMG in India's analysis based on stakeholder discussions, 2016

agency could be made responsible for creation of a 'Study in India' portal, a one-stop information point for education-related queries for foreign students.

- **Special Education Zones:** The creation of 'Special Education Zones', or education hubs, could be established. Institutions in such zones could be given the mandate to offer a global curriculum, and could be outside the purview of the UGC and AICTE, but the given mandate should have accreditation with international accreditation agencies.
- **Promotion of 'Brand India' in higher education:** There could be emphasis on the inclusion of education in roadshows and international fairs, in the potential markets of Africa, West Asia and Southeast Asia.

| Mode 3

- **Credit availability: Banks** could be encouraged to set up a rating system to allow easier credit availability for educational institutions that wish to set up campuses abroad, especially for those institutes that have international accreditation.

| Mode 4

- **Mutual recognition agreements:** India is represented in the Washington Accord, which encourages and facilitates the mobility of engineering professionals, by the National Board of Accreditation. Other professional bodies could also follow the NBA example.

At the government level, MRAs could be taken up as part of FTAs. However, this could require domestic regulatory reforms particularly in the medical, dental, nursing and legal services.

- **Social Security Agreements (SSA):** Bi-lateral social security agreements could be concluded with countries that are popular destinations for Indian students, as well as countries where India is popular as a destination for higher education.
- **Repatriation of earnings:** The challenges of high taxation of earnings repatriation in certain countries could to be taken up for bilateral discussions for corrective resolution.

The Maintenance, Repair and Overhaul (MRO) sector



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Sector overview



India is a services-driven economy. The services sector contributes over 50 per cent to the country's GDP.¹ With a broad services portfolio, Aerospace and Defence (A&D) is amongst the high priority sectors for the government today. A&D services in India mainly comprise Maintenance, Repair and Overhaul (MRO), engineering services, and research and development (ER&D). India is also positioned to become an MRO hub in future with its expanding aircraft fleet.

| MRO

The MRO sector mainly encompasses companies engaged in repairs, inspection or modification, and overhauling of the aircraft and shipping components. The segment is divided on the basis of services provided by the companies, that is, airframe maintenance, engine maintenance, line maintenance, ship and submarine repair, and component maintenance. MRO in aviation sector is further divided by the type of aircraft: civil aviation MRO and defence aviation MRO. MRO in shipping industry has significant potential, as approximately 42 per cent of the fleet is over 20 years old, as per the economic survey of 2015-16.²

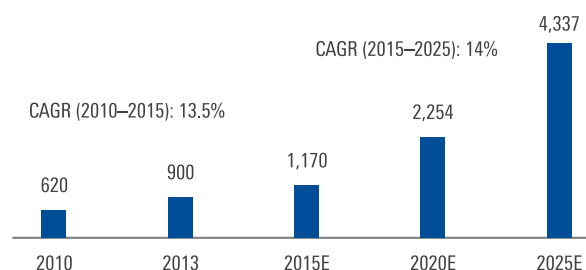
Given its cost advantage, the Indian aerospace MRO industry has the potential to contribute significantly to exports in the future.

| Civil aviation MRO:

The Indian civil aviation MRO market is at a nascent stage and contributes approximately 1 per cent to the global MRO market of USD61 billion.³ The sector is expected to grow rapidly in the near future with supportive

government policies, such as 100 per cent FDI in the MRO sector⁴ and low labour cost advantage, that could encourage investment from foreign players. In addition, increasing air traffic and expanding fleet size, along with presence of low-cost airlines, have opened opportunities in civil aviation MRO sector. The Indian civil aviation market is expected to grow at a CAGR of 14–15 per cent to reach an estimated value of USD4.3 billion by 2025 from the current value of USD900 million.³ At present, about 6,000 people are engaged in the sector, but it has the potential to employ at least 40,000.⁵

Aircraft MRO market in India — size and growth (USD million)



Source: Indian aircraft maintenance, repair & overhaul (MRO) market, published by Defense ProAc, September 2014

Source: 1 "Services Sector, India in Business," Ministry of External Affairs, Government of India, September 2015, <http://indiainbusiness.nic.in/newdesign/index.php?param=advantage/169>;

2 "India in urgent need to increase shipping fleet: Survey," India Today, 26 February 2016, <http://indiatoday.intoday.in/story/india-in-urgent-need-to-increase-shipping-fleet-survey/1/606009.html>;

3 "Indian Aircraft Maintenance, Repair & Overhaul (MRO) market," published by Defense ProAc, September 2014, <http://www.defproac.com/?p=1438>;

4 "MAKE IN INDIA – MRO Makes it Happen," Stat Times, 10 August 2015, <http://www.stattimes.com/index.php/make-in-india-mro-makes-it-happen/>;

5 "Make in India: Aviation sector pitches to exploit the potential of aircraft MRO business," Economic Times, 9 January 2015, http://articles.economictimes.indiatimes.com/2015-01-09/news/57884068_1_mro-work-air-india-air-works;

I Defence aviation MRO:

Military MRO is presently conducted at base repair depots by the Indian armed forces. However, private companies are slowly emerging in this space. Due to technology issues and service-related delays with Indian Public Sector Units (PSUs), the Indian defence ministry is engaging even more with Indian private firms for providing MRO services for military equipment. The increase in defence spending in the 2016-17 Union Budget by 9.7 per cent to approximately USD39 billion as compared with the previous year⁶, with plans to acquire more aircraft and helicopters, and ageing fleets are likely to be major drivers for defence aviation MRO in India.

The Indian government has taken concrete steps to promote MRO, such as exempting capital goods and imported materials for repair of ships, and reducing import duty on spare parts for the aviation sector. In 2015, the shipping industry, including ship repair, was given infrastructure status, enabling the industry to enjoy tax benefits under section 80A of the Income Tax Act.⁷ For the MRO sector, about 100 per cent FDI is allowed in the civil aviation sector under the automatic route. The government is expected to invest INR70,000 crore in 12 major ports of the country in the next five years. These measures could lead to increased investments in the sector, from private and foreign players.^{8,9}



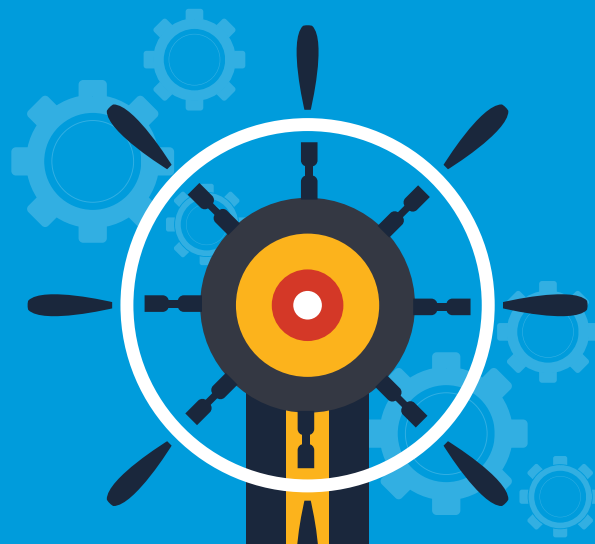
Source: 6 "Union Budget 2016: Marginal hike of 9.7% in India-01 defence budget," Hindustan Times, 29 February 2016, <http://www.hindustantimes.com/union-budget/union-budget-2016-marginal-hike-of-9-7-in-india-s-defence-budget/story-Xz9kdOSqdzGaP8iiAeq3gM.html>

7 "Govt declares infrastructure status for ship building and ship repair industry," Sagar Sandesh, 10 December 2015, <http://www.sagarsandesh.in/shipping/govt-declares-infrastructure-status-for-ship-building-and-ship-repair-industry/> ;

8 "Policy for India's Services Sector," Finance Ministry, March 2010, <http://finmin.nic.in/workingpaper/policy%20Paper%20on%20Services%20Sector.pdf>;

9 "Industry & Sectors," India Business-NIC, 28 December 2015, <http://shipping.nic.in/showfile.php?lid=1943>

Demand side

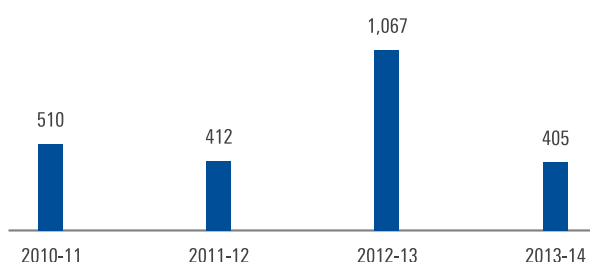


At present, only 5–10 per cent of domestic aircrafts avail MRO services in India and most of the maintenance activities are outsourced to third-party service providers outside the country.¹⁰ However, this scenario could change if adequate infrastructure, such as hangars, parking and land, is made available in close proximity to airports. Issues related to taxation, such as high service tax, excise duty and VAT, which nullify the advantage of low labour cost demand attention. To improve exports, domestic companies in India could acquire global certificates issued by the European Aviation Safety Agency (EASA) or the Federal Aviation Administration (FAA) to eliminate the limitations in operations.

Shipping MRO:

India has more than 7,500 km of coastline, the sixteenth largest in the world.¹¹ However, India has less than 1 per cent share in the global ship repair market, indicating a largely untapped sector.¹² Ship repair facilities are present in West Bengal, Tamil Nadu, Kerala, Maharashtra, Odisha and Gujarat. Leading private and public sector companies, have more than 50,000 Dead Weight Tonnage (DWT) capacity for repairing ships. The number of ships repaired in India has increased from 172 in 2010–11, to 200 in 2013–14, with PSUs having at least 50 per cent share each year.¹²

Indian ship repair market — total earnings (INR crore)



Source: Statistics of India's Ship building and ship repairing industry, Ministry of Shipping, 2013-14, <http://shipping.nic.in/showfile.php?lid=1943>

The government's draft Civil Aviation Policy released in October 2015, included several benefits for the MRO sector, such as:

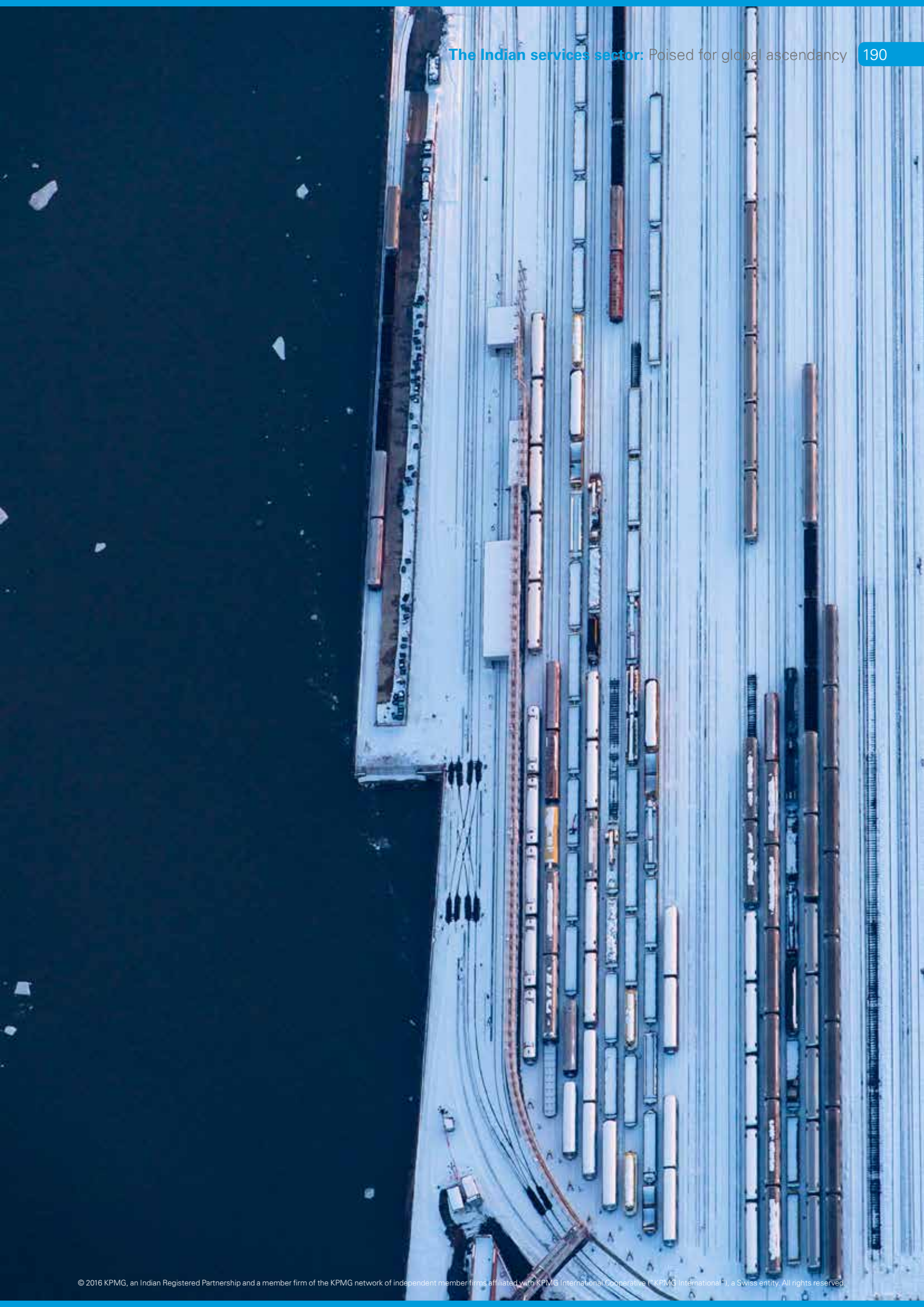
- Abolition of service tax
- Exemption of aircraft maintenance tools from customs duty
- Tax waivers on spare parts for up to three years
- Simplification of rules and procedures.

Despite having a significant chunk of engineers, India does not have enough domain expertise in the aerospace and defence sector, and lacks quality engineers. India could impart the right skills for the MRO segment, as it is primarily a technical service-based industry. The increasing share in world trade, along with the growth of the Indian middle class population, coupled with the fact that the MRO sector is untapped in India, presents a viable growth opportunity.

Source: 10 "Indian Aircraft Maintenance, Repair & Overhaul (MRO) market," published by Defense ProAc, September 2014, <http://www.defproac.com/?p=1438>;

11 "Union Budget 2016: Marginal hike of 9.7% in India-01 defence budget," Hindustan Times, 29 February 2016, <http://www.hindustantimes.com/union-budget/union-budget-2016-marginal-hike-of-9-7-in-india-s-defence-budget/story-Xz9kdOSqdzGaP8iiAeq3gM.html>;

12 "Statistics of India's Ship building and ship repairing industry," Ministry of Shipping, 2013-14, <http://shipping.nic.in/showfile.php?lid=1943>;

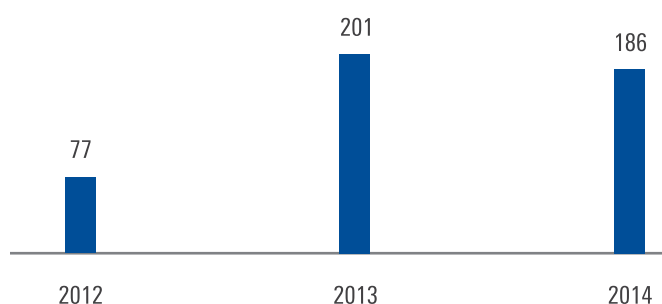


India's profile in the sector — Exports



Increase in competition and cost pressure has led to a trend of outsourcing of technology, design and component/sub-assembly manufacture, among the global aerospace companies. With the globalisation of the aerospace supply chain, both Original Equipment Manufacturer (OEM) and Tier-1 suppliers are leveraging the advantages of outsourcing. Strong capabilities and supportive government policies, such as the liberalisation of the Foreign Direct Investment (FDI) policy, has attracted global aerospace companies to invest in India.

Indian MRO exports (USD million)



Source: WTO Website, accessed on 19 January 2016, http://stat.wto.org/StatisticalProgram/WSDViewDataPrintableVersion.aspx?Language=E&TOPIC=BP&SUBTOPIC=BC6&PAGEINDEX=1&ROWSCNT=30&STARTYEAR=2010&ENDYEAR=2014&MSTR_QUERY_TYPE=PRINT

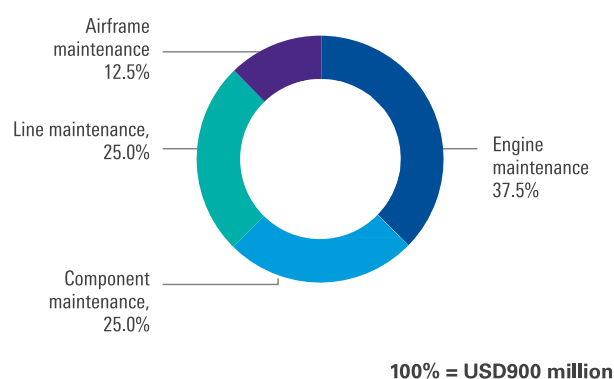
MRO:

At present, India imports a wide range of MRO services — airframe maintenance, engine maintenance, ship repair and component maintenance. The development of advanced maintenance services can not only help India

address domestic needs, but also provide bandwidth for exports in the near future. While line maintenance is mostly done in-house by the aviation and domestic MRO companies, India outsources its engine, component and airframe maintenance services to other countries.

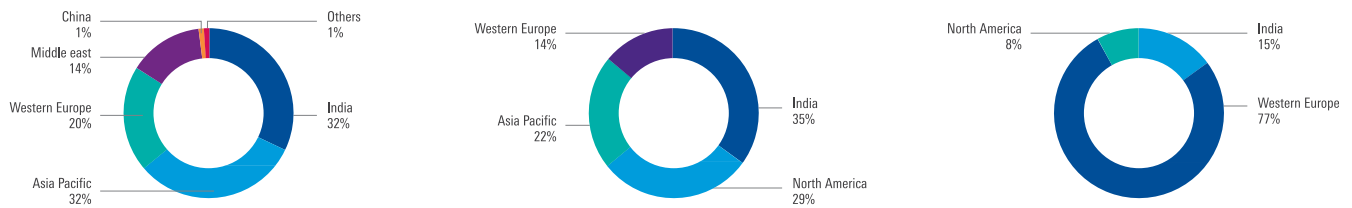
India could tap the ASEAN countries, such as Singapore and Philippines, as they imported more than USD750 million (combined) of MRO services in 2014.¹ These countries are important trade hubs for India, besides being geographically closer. Also, Russia and the US could be explored for a combined business opportunity worth more than USD9 billion, based on their imports in 2014. The Indian government's Make in India initiative could be leveraged to increase the country's footprint in the global MRO sector. The government is expected to invest significantly in the initiative, besides offering a simplified tax regime and business-friendly policies.¹³

Indian MRO services industry by segment



Source: Global MRO Market Economic Assessment Air Transport 2014, prepared by Team SAI

MRO services to Indian aircraft: Domestic versus outsourced



Source: Global MRO Market Economic Assessment Air Transport 2014, Team SAI, January 2014, <http://arsa.org/wp-content/uploads/2014/03/ARSA-TeamSAI-EconomicReport-20140307.pdf>

Demand for MRO services¹⁴

Currently, only primary level of MRO services is being provided in India. For advanced services, commercial airlines outsource them to Western Europe, North America and other Asian countries. Hence, there is an immense opportunity in the Indian commercial MRO market, which is still untapped. To fulfil this demand, a number of joint ventures and partnerships have been formed recently between the domestic and overseas companies.

Demand for MRO services – Language capabilities required

English would be the primary language to be used when working with developed regions on aviation and ship repair services. Mandarin and a few other Asian language capabilities could also help attract business from the East Asian countries.

Recent developments

- September 2015: Cochin Shipyard Limited (CSL) is expected to build a ship repair facility at a cost of INR970 crore¹⁵
- June 2015: Gujarat is expected to witness an investment worth INR6,129 crore for the ship building and ship repair industry¹⁶
- December 2015: Hon. Prime Minister. Mr. Narendra Modi, approved a policy, to encourage the ship building and ship repair industry in India, consisting of measures, such as the grant of financial assistance to shipyards¹⁷
- December 2015: The Union cabinet approved INR4,000 crore for the development of ship building and the ship repair industry¹⁷
- December 2015: The Ministry of Shipping, revoked the clause for Ship Repair Units (SRU) to get registered with DG Shipping¹⁸
- January 2016: The Indian government is expected to build ship repair yards at Kandla, Kochi, and Andaman and Nicobar Islands¹⁹
- Pawan Hans is expected to venture into MRO segment, as it has plans to set up two MRO facilities in Mumbai and Delhi²⁰

Source: 14 KPMG in India Analysis;

15 "CSL to Build Dry Dock, Ship Repair Facility," Indian Express, 30 September 2015, <http://www.newindianexpress.com/cities/kochi/CSL-to-Build-Dry-Dock-Ship-Repair-Facility/2015/09/30/article3054746.ece>;

16 "Gujarat to attract Rs 6,100 cr in ship-building & repair projects," Indian Express, 25 March 2015, <http://indianexpress.com/article/india/gujarat/gujarat-to-attract-rs-6100-cr-in-ship-building-repair-projects/>;

17 "Prime Minister Office of India: Indian Shipbuilding and Ship-repair Industry – A Strategy for promoting 'Make in India' initiative," Hellenic Shipping News, 10 December 2015, <http://www.hellenicshippingnews.com/prime-minister-office-of-india-indian-shipbuilding-and-ship-repair-industry-a-strategy-for-promoting-make-in-india-initiative/>;

18 "Ministry of Shipping of Republic of India: New Opportunities Unveiled in Shipping Sector," Hellenic Shipping News, 31 December 2015, <http://www.hellenicshippingnews.com/ministry-of-shipping-of-republic-of-india-new-opportunities-unveiled-in-shipping-sector/>;

19 "JN Port and Maharashtra Maritime Board sign MoU to build Satellite Port off Vadhavan Point," Daily Shipping Times, 8 June 2015, http://www.dailyshippingtimes.com/news-upload/upload/fullnews.php?fn_id=10795;

20 "Pawan Hans declares dividend, is on track for IPO, plans to venture into MRO space," The Economic Times, 21 January 2016, http://articles.economictimes.indiatimes.com/2016-01-22/news/69989390_1_crore-previous-year-helicopters.

| India's profile in the sector – Mode-wise potential

In line with the General Agreement on Trade in Services, the Ministry of Commerce and Industry permits MRO exports through four modes. However, Mode 2 and Mode 3 are most widely used channels for MRO exports from India.

Mode 2 – Consumption abroad:

Indian firms engaged in the MRO sector provide repair and overhaul services to foreign airlines and cargo ships operating in India. The Indian government aims to increase MRO exports, by the means of provisions, such as sanctioning temporary landing permits to international pilots operating the aircraft to and from India for servicing, allowing foreign aircraft brought to India for MRO work, to stay in the country for the entire period of maintenance or up to six months, whichever is lesser, etc.²¹

Mode 3 – Commercial presence:

Indian companies are focussing on increasing their presence in the global MRO industry landscape by setting up MRO operations in foreign countries, via establishing subsidiaries or forging joint ventures with local players.²²



Source: Global MRO Market Economic Assessment Air Transport 2014, Team SAI, January 2014, <http://arsa.org/wp-content/uploads/2014/03/ARSA-TeamSAI-EconomicReport-20140307.pdf>

Source: 21 "Maintenance, Repair and Overhaul (MRO) Industry in India," General Knowledge Today, 8 November 2015, <http://www.gktoday.in/blog/maintenance-repair-and-overhaul-mro-industry-in-india/>;

22 "Air Works India forms JV to start MRO services in Nepal," Business Standard, 29 November 2014, http://www.business-standard.com/article/companies/air-works-india-forms-jv-to-start-mro-services-in-nepal-114112400759_1.html;

23 "Regional Air Connectivity," GUJSAIL website, accessed on 4 April 2016, <https://gujsail.gujarat.gov.in/regional-air-connectivity.htm>;

24 "AP govt mulls setting up aerospace, aviation hubs in state," Deccan Chronicle, published 19 February 2015, <http://www.deccanchronicle.com/150219/nation-current-affairs/article/ap-govt-mulls-setting-aerospace-aviation-hubs-state>;

25 "KARNATAKA The Gate way to Global Aerospace," Government of Karnataka, 06 February 2013, http://gubbilabs.in/demo/investkarnataka/sites/default/files/Aerospace%20Policy_Final.pdf;

26 "Telangana woos aerospace majors to invest in SEZ near Hyderabad," Business Standard, published 20 February 2015, http://www.business-standard.com/article/economy-policy/telangana-woos-aerospace-majors-to-invest-in-sez-near-hyderabad-115022000544_1.html;

27 "India's top 25 states with highest GDP," rediff.com, February 2012, <http://www.rediff.com/money/slide-show/slide-show-1-top-25-states-with-highest-gdp/20120223.htm>;

28 "Despite govt rhetoric," Telangana, Andhra Pradesh stalls fail to impress, Times of India, 19 March 2016, <http://timesofindia.indiatimes.com/city/hyderabad/Despite-govt-rhetoric-Telangana-Andhra-Pradesh-stalls-fail-to-impress/articleshow/51465151.cms>;

29 "Tamil Nadu to come up with new aerospace policy to attract investments," Business Standard, published 4 Mar 2015, http://www.business-standard.com/article/current-affairs/tamil-nadu-to-come-up-with-new-aerospace-policy-to-attract-investments-115030400366_1.html

Clusters of ship repair³⁰

Ship repair facilities and dry docks are available at many major ports in India. For example, the Kolkata port has five dry docks, which is the maximum number of dry docks across all Indian ports. In addition, Mumbai, Kandla, Visakhapatnam, Mormugao, Paradip and V.O. Chidambaranar ports, have one dry dock each.



Gujarat Shipping Policy^{31,32} Gujarat is one of the leading states in the Indian ship building and repair industry. In January 2016, the state government announced a new, '**Ship Recycling Policy 2015**', to support the struggling ship recycling industry at Alang, Asia's biggest ship-breaking yard. The state has also formulated and implemented the '**Ship Building Policy 2010**' for facilitating the development of ship building and repair industry, and to maintain its market share in India, which is over 60 per cent.

Source: Global MRO Market Economic Assessment Air Transport 2014, Team SAI, January 2014, <http://arsa.org/wp-content/uploads/2014/03/ARSA-TeamSAI->

Source: 30 "STATISTICS OF INDIA'S SHIP BUILDING AND SHIP REPAIRING INDUSTRY 2013-14," Shipping Ministry Website, 26 February 2015, <http://shipping.nic.in/showfile.php?lid=1943>;

Source: 31 "Gujarat comes out with policy to help Alang ship-breaking industry," The Economic Times, 18 January 2016, http://articles.economictimes.indiatimes.com/2016-01-18/news/69870423_1_ship-breaking-yard-ship-breaking-plots-alang;

32 "Ship Building Policy-2010, Gujarat Maritime Board, 2010, http://www.gmbports.org/assets/downloads/final_SHIPBUILDING_POLICY.pdf

| Case study: An Indian aeronautics company³³



- Founded in October 1964, by the merger of two government agencies focusing on aeronautics
- Headquartered in Bengaluru, Karnataka, it is one of India's leading aerospace and defence company, owned by the Government of India
- The company's primary business is design, development, manufacture, repair and overhaul of aircraft and helicopters engines, and their accessories
- It has 19 production units and 10 research and design centres in eight locations in India
- HAL has manufactured over 3,550 aircraft, 4,178 engines, and overhauled over 8,150 aircraft and 27,300 engines³⁴

| Success factors

Strong research and development capabilities provide the company a competitive edge in the fields of design, development, prototype building and testing

- The company spent 7.2 per cent of its turnover in R&D in FY14³⁵

The company has established extensive linkages with many overseas firms, possessing diverse competencies, including repair, design, and manufacture of helicopters and aircraft³⁶

The company has formed 11 joint ventures with four companies to help attain economies of scale³³

Being a government entity, the firm commands trust and market access, thus attaining a large number of national and international orders.

- The company is the main aerospace contractor for the Indian Air Force³⁶

³³" HAL website," accessed on 01 December 2015, http://hal-india.com/Joint%20Venture%20Companies/M__29;

³⁵"Hindustan Aeronautics Limited : Aerospace and Defense – Company Profile & SWOT Analysis," Market Research.com, accessed on 01 December 2015, http://www.researchandmarkets.com/reports/1926867/hindustan_aeronautics_limited_company_profile.pdf;

³⁵ "HAL annual report 2013-14," HAL website, accessed on 01 December 2015, <http://hal-india.com/Common/Uploads/Finance/Annual-Report-2013-14-English.pdf>;

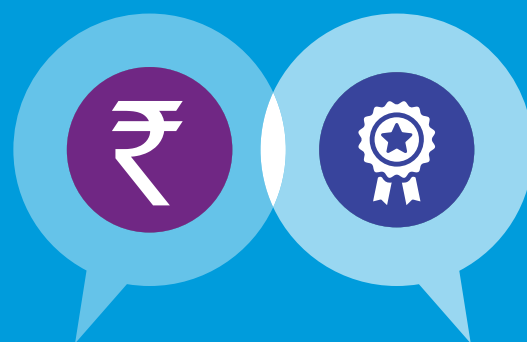
³⁶"Company Profile – Hindustan Aeronautics Limited (HAL) – Q1 2015," BMI Research Company, Factiva accessed on 01 December 2015

| Potential growth strategies³⁷

Evolution of strategies to promote the MRO sector

Short term	Medium term	Long term
<ul style="list-style-type: none"> – The government could reduce taxations on MRO services at central and state levels, enabling Indian MRO companies to offer globally competitive pricing. – Exemptions from custom duty on the imports of tools, equipment, spare parts, etc., are required for MRO services. – Simplification and standardisation of custom clearance process is expected to enable timely availability of imported parts, tools and machinery, subsequently avoiding project delays and cost overruns. 	<ul style="list-style-type: none"> – Development of skilled talent is required in the field of maintenance, repair, research and development, and overhaul. To enable skill development, the government could collaborate with the industry and academic institutes to formulate MRO- specific skill development training modules, by incorporating international best practices. – The government could also build MRO infrastructure, including dry docks and ship repair yards, at all major ports, as well as small ports, to enhance the ship repair capacity. – The Indian government could ensure that adequate space is mandatorily allocated at the Indian airports for MRO. – Provisions could be made by the government to ensure availability of affordable finance for setting up MRO facilities and their development. 	<ul style="list-style-type: none"> – Public and private R&D agencies could be motivated to work together in building capability and developing necessary technologies. – The government could promote development of SEZs for aviation and shipping MROs, to make India an MRO hub. – The government could establish strategic partnerships with other countries, such as Singapore, China, the UAE and Sri Lanka, for technology transfer and improving trade in MRO services.

Competition to India



The global civil air transport MRO market was pegged at USD60.7 billion in 2013. The global ship repair, maintenance and conversion market is estimated to be in the range of USD10–12 billion as on 2011.³⁸ The global MRO market is expected to grow to USD89 billion by 2023, at 3.9 per cent per annum.³⁹ In totality (combining the aggregate demand for airframe, engine, and component MRO), North America and Western Europe are the net exporters of MRO services, engine overhaul maintenance services and component maintenance services.³⁹ Western Europe, Asia Pacific, China and the Middle East are the net exporters of airframe maintenance services. These regions have been able to gain a significant market share because of the right mix of service offerings, focus on intellectual property to capture a greater share of their respective after markets, emphasis on specialisation, significant aerospace R&D and government initiatives within the aviation industry. France, Russia, the U.S., Canada, the Philippines and Singapore are important hubs for ship repair services. France has the sixth largest ship building and ship repair industry in the world. Russia and the Middle East are gradually increasing their footprint in the MRO sector, while Singapore and the U.S. have maintained their leadership position.⁴⁰

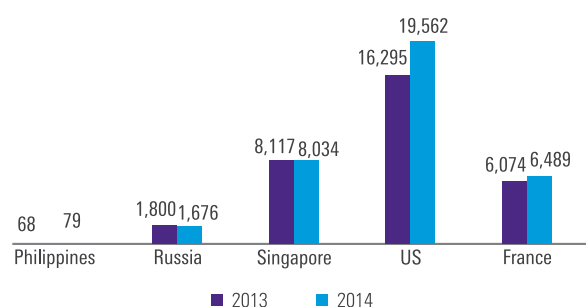
Competition to India — Leading global practices

Leading practices

- Eliminating fiscal disincentives (import duty, value-added tax and service tax) on domestic MRO
- Establishing MRO facilities to enhance in-house MRO capabilities
- De-linking MRO services from ground handling
- Encouraging airports to support MRO as a strategic activity
- Increasing the level of R&D and skill development within the aviation industry

Source: *Mirage or Oasis? MRO Outsourcing in India Report*, Air Works, 2013, [http://www.airworks.in/pdf/Asian_Airlines&Airports_July_Aug_2013_\(Mirage\).pdf](http://www.airworks.in/pdf/Asian_Airlines&Airports_July_Aug_2013_(Mirage).pdf), accessed on 6 March 2015

Competition to India — MRO exports (USD million)



Source: WTO website, accessed on 19 January 2016, http://stat.wto.org/StatisticalProgram/WSDViewDataPrintableVersion.aspx?Language=E&TOPIC=BP&SUBTOPIC=BC6&PAGEINDEX=1&ROWSCNT=30&STARTYEAR=2010&ENDYEAR=2014&MSTR_QUERY_TYPE=PRINT

Source: 38 "MRO Market Forecast and Key Trends," ICF, 2014, http://www.alta.aero/mro/2014/upload/presentations/wednesday/1-jonathan_berger.pdf;

39 "Global MRO Market Economic Assessment Air Transport Report Team SAI, 2014, <http://arsa.org/wp-content/uploads/2014/03/ARSA-TeamSAI-EconomicReport-20140307.pdf>;

40 "Maritime sector developments in the global markets," Smart Comp, 3 October 2013, <https://www.utu.fi/en/units/tse/units/PEI/research/Documents/SmartComp%20Research%20Report%20October%202013%20final.pdf>

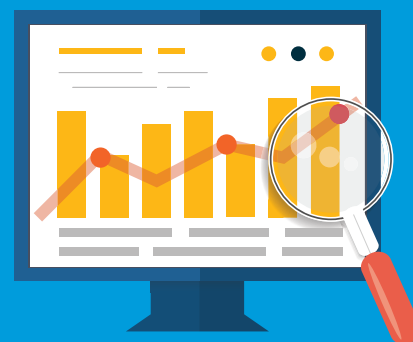
I Enhancing MRO exports from India^{41, 42}

- Relaxation in central and state taxes on MRO
- Policy framework of government, procedures and regulatory structure could be made futuristic, pro-active and aligned to stakeholders' expectations.
- Classifying MRO as a separate group by amending DGCA aircraft rules .
- Making ample mandatory space available for MRO services at Indian airports.
- Incentivising airlines to set up their dedicated MRO hubs in India through Public–Private Partnership (PPP) model with MRO service providers and airport companies.
- Building more sophisticated and integrated facilities, and upskill the workforce to do heavy maintenance work, which is mostly outsourced to date.
- Creating Special Economic Zone (SEZ) hubs for aviation and shipping industry.
- Establishing training institute/university to conduct research activities and train personnel in MRO services.

Source: 41 "Over taxation, lack of infrastructure hampering aviation market: report", *The Hindu*, 13 March 2014, <http://www.thehindu.com/business/Industry/over-taxation-lack-of-infrastructure-hampering-aviation-market-report/article5781211.ece>;

42 "Aviation MRO in INDIA – the Opportunities and Challenges," *Aviation Space Defence Security*, <http://aviationspaceindia.com/content/aviation-mro-india-opportunities-and-challenges>

Strengths and opportunities⁴³



Strength

- Low cost labour is a competitive advantage for India
- India's geographic location, and expertise in engineering design and R&D services are enablers for attracting MRO business
- India's long coastline attracts large cargo shipping traffic

Opportunities

- The government has undertaken measures for liberalisation and rationalisation by providing easy finance, incentives and thrust on exports through the defence offset policy. The 'Make in India' initiative acknowledges the opportunities for the private sector
- The defence budget spending has been increased by about 11 per cent in FY16 compared to FY15⁴⁴
- The development and expansion of SEZ parks to host aerospace and defence value chain can be key enablers to cost savings.

Source: "Ascent of the Advisor," *Business Today*, <http://www.businesstoday.in/magazine/features/financial-investment-consultants-gain-economy-falters-2014/story/204873.html>, 27 April 2014

Source: 43 KPMG in India Analysis;

44 "India Increases Military Budget By 11 % to Nearly \$40 Billion," *The Wall Street Journal*, 28 February 2015, <http://www.wsj.com/articles/india-increases-military-budget-by-11-to-nearly-40-billion-1425124095>;

45 "Aviation MRO industry calls for proper policy," *Business Standard*, 28 April 2013, http://www.business-standard.com/article/companies/aviation-mro-industry-calls-for-proper-policy-113042800044_1.html

Enhancing MRO services exports from India



Enhancing MRO services exports from India — Indian firms could potentially benefit from the⁴⁸:

- Formation of an inter-ministerial task force on MRO by the government to check outflow of MRO revenue, foreign exchange and jobs
- Setting up of the proposed Essential Air Services Fund (EASF) by the Ministry of Civil Aviation (MoCA)⁴¹
- Abolishment of import duties on spare parts, Value Added Tax (VAT) and Service Tax, which is expected to encourage development of MRO infrastructure in India
- Assessment of procedural challenges faced by MROs in importing spares, using the services of experts from foreign countries, creation of necessary infrastructure, etc., and addressing issues immediately
- Customisation of maintenance engineering courses available in India to match industry requirements
- Consideration of benefits — such as exemption from state electricity duties, stamp duty, land benefits — to attract MRO service providers
- Rationalisation of the customs duty exemption on import of MRO tools and consumables — existing customs exemption covers only parts and testing equipment for MRO operations.

Enhancing MRO services exports from India — approaching international markets⁴⁸

- **Building globally competitive skills and capabilities:** Only a limited number of players have mandatory global certifications from the U.S. Federal Aviation Administration (FAA) or European Aviation Safety Agency (EASA) or U.A.E.'s General Civil Aviation Authority (GCAA), for carrying out heavy maintenance works for aircrafts. The Indian government could promote certifications by offering sponsorship or reimbursement of the cost of obtaining global certifications as an incentive to the industry.
- **Providing SEZ status to shipping and aviation MRO hubs:** Developing dedicated Aerospace Parks at airports for MRO and similar activities, with open access to runways are likely to help in offering specialised services from 'nose to tail' at a global level.
- **Materializing more MRO projects:** Modern facilities and infrastructure, such as those at Air India-Boeing in Nagpur, Air Works at Hosur, GMR-MAS at Hyderabad and CIAL at Kochi, might attract foreign operators to enter into long-term contracts with the Indian MRO services providers.
- **Developing MRO infrastructure:** The government could construct dry docks at all major shipyards, with modern facilities and latest technologies, following global leading practices to build MRO infrastructure, which could increase ship repair capacity in the country.

Source: 48 "Aviation MRO in INDIA – the Opportunities and Challenges," Aviation Space Defence Security, accessed on 6 March 2015, <http://aviationspaceindia.com/content/aviation-mro-india-opportunities-and-challenges>

Regulatory architecture^{49, 50, 51, 52, 53}



Standards

- Quality management system (As 9100 Certification)
- Quality maintenance system (As 9110 Certification)
- International Organization for Standardization (ISO-14001-2004 Certification, ISO 9001-2000)
- NADCAP certification (National Aerospace Defense Contractors Accreditation Program — U.S.A.)
- International Ship Suppliers Association's quality standard
- Indian Register Quality Systems (IROQS)

- Indian Register of Shipping (IRS)
- ICC Shipping Association (ICCSA)
- Maritime Association of Shipowners Shipmanagers and Agents (MASSA)
- Indian National Shipowners' Association (INSA)

Acts⁵⁴

- The Aircraft Act, 1934
- Aircraft Rules — 1937
- Indian Maritime Act, 2008
- Merchant Shipment Act, 1958
- Multimodal Transportation of Goods Act, 1993
- Major Port Trusts Act, 1963

Regulators

- Ministry of Civil Aviation (MoCA)
- Directorate General of Civil Aviation (DGCA)
- Airports Authority of India (AAI)
- Air Traffic Controllers' Guild (India)
- Airports Economic Regulatory Authority (AERA)
- MRO Association of India
- Society of Indian Aerospace Technologies and Industries (SIATI)
- The Aeronautical Society of India
- State level Maritime Boards

Source: 49 "News and Events," MRO Association of India, <http://www.mroassociation.in/newsNevents.html>, accessed on 6 March 2015;

50 "Aviation MRO in INDIA – the Opportunities and Challenges," Aviation Space Defence Security , accessed on 6 March 2015, <http://aviationspaceindia.com/content/aviation-mro-india-opportunities-and-challenges>;

51 "DGCA website," accessed on 6 March 2015, <http://dgca.nic.in/dgca/dgca-ind.htm>;

52 "Aerospace Industry in India," Defense-Aerospace.com, accessed on 6 March 2015, <http://www.defense-aerospace.com/article-view/feature/102287/quick-overview-of-india%E2%80%99s-aerospace-industry.html>;

53 "Solutions for a connected world, MROTEK, November 2013, <http://www.mro-tek.com/downloads/mrotekbrochure.pdf>, accessed on 6 March 2015; Unlocking the Potential-The Indian Aerospace and Defence Sector, KPMG, August 2011, http://www.kpmg.com/IN/en/IssuesAndInsights/ThoughtLeadership/KPMG_Indian_Defence_Industry.pdf;

54 "Acts and Rules," Ministry of Shipping, accessed on 22 January 2016, <http://shipping.nic.in/index1.php?lang=1&level=0&linkid=36&lid=48>

Small and medium enterprises in MRO



The Indian MRO industry is at a nascent stage where the civil aircraft MRO contributes only 1 per cent to the global MRO market. However, the Indian carriers are expected to double their fleet size to 900-1,000 aircrafts by 2020, compared to 2014 levels, which would provide plenty of opportunities for MRO companies.¹ Similarly, cargo traffic to be handled by the Indian ports is projected to reach 1,695 million metric tonnes by 2021-22, registering an increase of 643 million tonnes from 2014-15, which could help boost the demand for ship repair and maintenance in the country.² Increasing air traffic, cargo traffic, demand for military aircraft and helicopters, naval fleet, etc., provide a plethora of opportunities for the Indian MRO industry, and especially for small and medium companies engaged in the industry.

Small and Medium Enterprises (SME) and Micro Small and Medium Enterprises (MSME) are likely to play a crucial role in the entire value chain of Indian MRO landscape due to the government's strong focus to boost home-grown manufacturing via the Make in India initiative. Currently, there are over 2,000 SMEs and 500 MSMEs across different clusters in the aerospace sector in India.³ Most of the MSMEs are located in Karnataka and supply components to HAL and ISRO — the two major aerospace companies of India, which are headquartered in Karnataka. In addition, SMEs are engaged in ship building, wrecking, repairing, manufacturing of ship parts, tools and equipment, etc. Development of these MSMEs is consequential to the growth of MRO in the aerospace and defence sectors, as well as the ship building and ship repair industry.

Many Indian SMEs are challenged by non-availability and inaccessibility to funding. In addition, these SMEs are

susceptible to a significant capital-intensive MRO business, followed by a long gestation period. These factors limit SMEs to provide high-quality support to OEMs.

Central and State governments have taken several initiatives to overcome the challenges faced by SMEs:

- Two SME exchanges have been set up to facilitate easier access to capital⁴
- An 'India Opportunities Venture Fund' with an approximate worth of USD800 million crore is being created through the Small Industries Development Bank of India⁴
- To facilitate the growth of SMEs, the Indian government under the Public Procurement Policy has made it compulsory for Central Public Sector Undertakings (CPSUs), Central government ministries and departments to procure a minimum of 20 per cent of products and services of their total procurements from MSMEs⁵
- The Government of Karnataka is providing financial support to the aerospace-focussed MSMEs for obtaining certifications — AS-9100 series and NADCAP. The government has also planned several Aerospace Parks in the state, in which at least 30–40 per cent of the land would be reserved for MSMEs.⁶
- With various government initiatives in place, and the Ministry of Defence (MoD) is setting itself a goal of sourcing 70 per cent of all equipment from Indian companies — public and private sectors — by 2020, the outlook for MSMEs in the Indian MRO sector looks promising.⁷

Source: 1 "Indian Aircraft Maintenance, Repair & Overhaul (MRO) market," Defence ProAc, September 2014, <http://www.defproac.com/?p=1438>;

2 "Ports and Shipping," Make in India, accessed on 06 March 2016, <http://www.makeinindia.com/sector/ports>;

3 "Indian aeronautics: Requirements and strategy for growth," Defence and Security of India, 01 February 2015, <http://defencesecurityindia.com/aerospace/>;

4 "Making in India, for aerospace and defence," The Financial Express, 16 February 2015, <http://www.financialexpress.com/article/fe-columnist/making-in-india-for-aerospace-and-defence/43316/>;

5 "2014 – Year end review of Indian MSME sector," SME Times, 26 December 2014, <http://www.smetimes.in/smetimes/in-depth/2014/Dec/26/2014-year-end-review-of-indian-msme-sector631822.html>;

6 "KARNATAKA The Gate way to Global Aerospace," Government of Karnataka, 06 February 2013;

7 "Gujarat: Emerging base for indigenization of the Indian Defence industry," Vibrant Gujarat, January 2015; <http://www.vibrantgujarat.com/images/pdf/Gujarat-Emerging-Base.pdf>

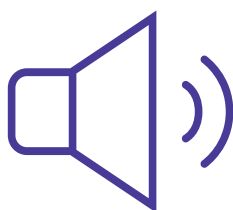


The media and entertainment sector



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Sector overview



The Media and Entertainment (M&E) industry is one of the most dynamic industries in India, with modern technologies acting as facilitators and accelerators for the sector's growth, considering that any shift in trends can have an impact across the tiers of the Indian consumer pyramid. Powered by digital media, changing content consumption patterns, phased progress in digitisation, regulatory and structural changes, emergence of new consumer centres across tier III and IV cities, and the rise of new sectors within, the industry has witnessed steady growth over the last few years.

The year 2014 turned out to be another exciting period for the sector in many ways. With the formation of the existing government in 2014, the Indian investor community has been optimistic about India. During the April–June 2014 quarter, the CII Business Confidence Index rose from 49.9 to 53.7, indicating improvement in the performance of the economy¹. Amidst heightened expectations from the current government, and driven by strong growth in advertising, the M&E industry grew by 11.7 per cent to reach USD17.1 billion in 2014, and is

expected to grow at a CAGR of 13.9 per cent during 2014–19².

The major sectors within the industry include television, print, films, radio, music, live events, gaming, Out-of-Home (OOH) advertising, and animation and Visual Effects (VFX). In 2014, the television segment accounted for the largest proportion of the total revenues of the M&E industry, and is expected to maintain its dominance over the next five years. While digital advertising witnessed

Industry size (USD billion)	2013	2014	2015P	2016P	2017P	2018P	2019P	CAGR (2014–19)
TV	7.0	7.9	9.1	10.5	12.3	14.2	16.3	15.5%
Print	4.1	4.4	4.7	5.1	5.5	6.0	6.4	8.0%
Film	2.1	2.1	2.3	2.6	2.8	3.1	3.4	10.0%
Radio	0.2	0.3	0.3	0.4	0.5	0.5	0.7	18.1%
Music	0.2	0.2	0.2	0.2	0.2	0.3	0.3	14.0%
OOH	0.3	0.4	0.4	0.5	0.5	0.5	0.6	9.8%
Animation and VFX	0.7	0.7	0.8	1.0	1.1	1.3	1.6	16.3%
Gaming	0.3	0.4	0.5	0.5	0.6	0.7	0.8	14.3%
Digital advertising	0.5	0.7	1.0	1.4	1.9	2.3	2.7	30.2%
Total	15.3	17.1	19.3	22.2	25.5	29.0	32.7	13.9%

Source: #shootingforthestars - Indian Media & entertainment report 2015; KPMG-FICCI Frames, March 2015

Source: 1 Modi govt has lifted business confidence: CII survey', Business Today, 30 June 2014

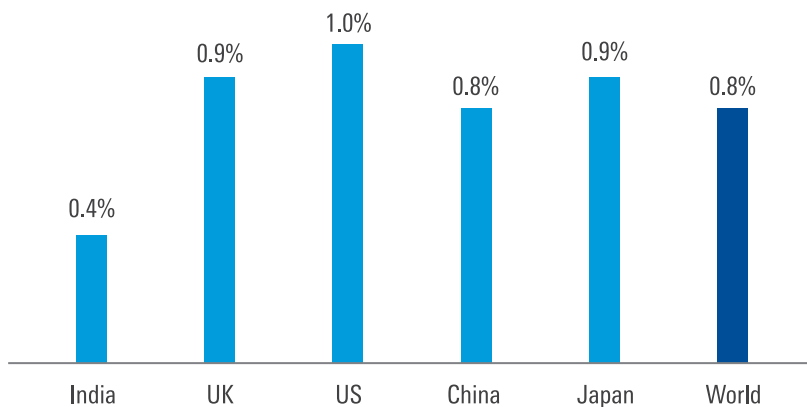
2 #shootingforthestars - Indian Media & entertainment report 2015'; KPMG-FICCI Frames, March, 2015

the highest growth last year, macroeconomic indicators such as rising literacy, continued urbanisation and growing content consumption, especially among the younger sections of the population, are expected to continue to drive traditional media's penetration and growth in India³.

The Indian M&E sector is the fourteenth largest in the world, and contributes about 1.7 per cent to the GDP⁴. However, compared to the global average of 0.8 per cent, spending on media as a percentage of GDP in

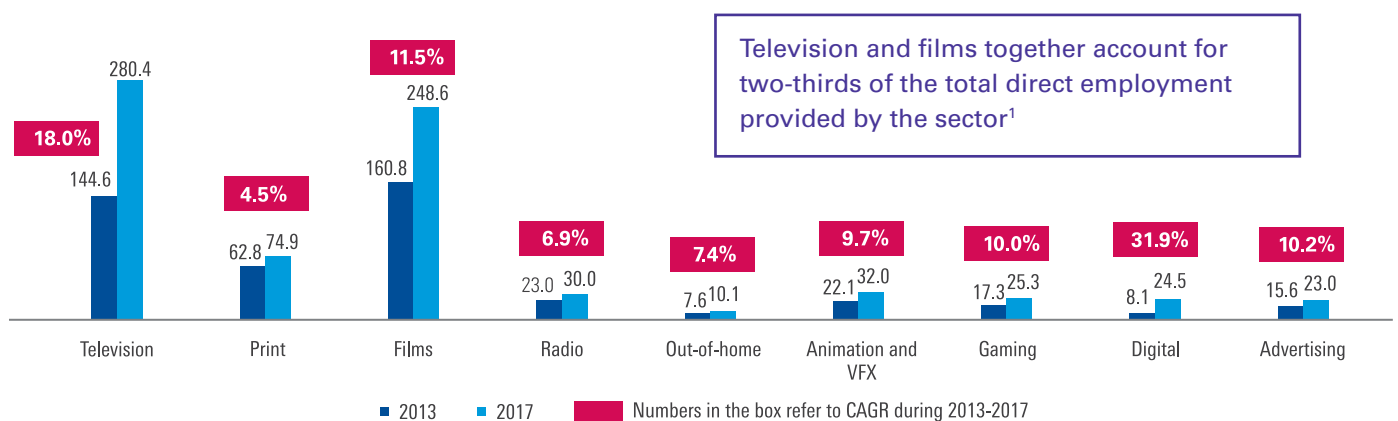
India stands at a mere 0.4 per cent⁵. The sector also provided full-time employment to 461,900 personnel in 2013, contributing close to 9.3 per cent to the total employment in the country. This number is expected to increase to 748,800 by 2017, growing at a CAGR of 12.8 per cent⁶. However, the stated employment figures do not include freelancers in the sector. Considering that freelancers form a large proportion of the workforce in the M&E industry, the total workforce of the sector is likely to be higher.

Media spend as a percentage of GDP – by countries (2013)



Source: 'Media sector report', Emkay Global Financial Services, October 2013

M&E personnel employed in India (in '000)



Source: 'Skills gap study for the media & entertainment sector', MESCC, February 2014

Source: 3 '#shootingforthestars - Indian Media & entertainment report 2015'; KPMG-FICCI Frames, March, 2015

4 'GDP at Factor Cost at 2004-05 Constant/Current prices by Industry of Origin

5 'Media sector report', Emkay Global Financial Services, October 2013

6 Skills gap study for the media & entertainment sector, Media & Entertainment Skills Council, February, 2014

The Indian media and entertainment industry has witnessed increasing digitization across a number of sub-sectors along with the growth of regional/localised content and digital media.

| Growth drivers

Digitisation	The evolving digital ecosystem has empowered and placed the M&E industry at the threshold of growth and success. Films, television and music are some of the key segments where digitisation has created a visible impact. For instance, the existence of digital theatre screens has enabled a far reaching impact, as movies can be released in over 5,000 screens simultaneously. Similarly, digitisation in television has opened up a plethora of monetisation opportunities for stakeholders. The value chain has become relatively transparent, stakeholders are in better control of their subscriptions and going forward, the dependence on advertising revenue can now be reduced. Additionally, the Ministry of Information and Broadcasting (MIB) has been undertaking several initiatives to continue the digital momentum ⁷ .
Regionalisation	There has been a tremendous growth in regional media over the last few years, owing to localisation of content. Stakeholders across the segments are including a regional element to their products and services. Vernacular dailies, regional TV channels, and localised DTH packages are some of the prominent examples of this phenomenon. A superior cultural fit for regional content, increasing focus on regional socio-specific issues and customer engagement, and focus of advertisers shifting to the regional markets are some key growth drivers for the segmen ⁸ .
Growth of digital media	The increasing internet subscriber base and mobile content consumption is fuelling the growth of digital media. As on 31 December 2014, the total number of wired and wireless internet connections stood at 20 million and 210 million, respectively. The rising mobile internet subscriber base (about 306 million mobile internet users at the end of 2015) has opened doors to mobile commerce and content consumption on-the-go. India has emerged as the world's fastest growing smartphone market, with content consumption shifting from 'home' screen to 'pocket' screen. Availability of content, such as music and videos, in varying digital formats (such as mobile applications) has intensified the generation of new and innovative business models, thus acting as a catalyst to industry growth ⁹ .

Source: ⁷ #shootingforthestars - Indian Media & entertainment report 2015; KPMG-FICCI Frames, March 2015

⁸ #shootingforthestars - Indian Media & entertainment report 2015; KPMG-FICCI Frames, March 2015

⁹ #shootingforthestars - Indian Media & entertainment report 2015; KPMG-FICCI Frames, March 2015

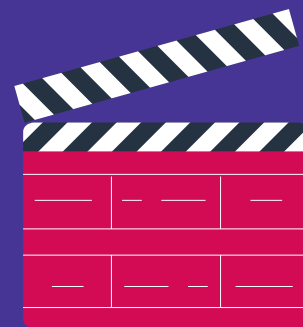
The media and entertainment sector continues to be mired with challenges such as piracy, stringent regulatory norms and lack of skilled talent.

| Challenges¹⁰

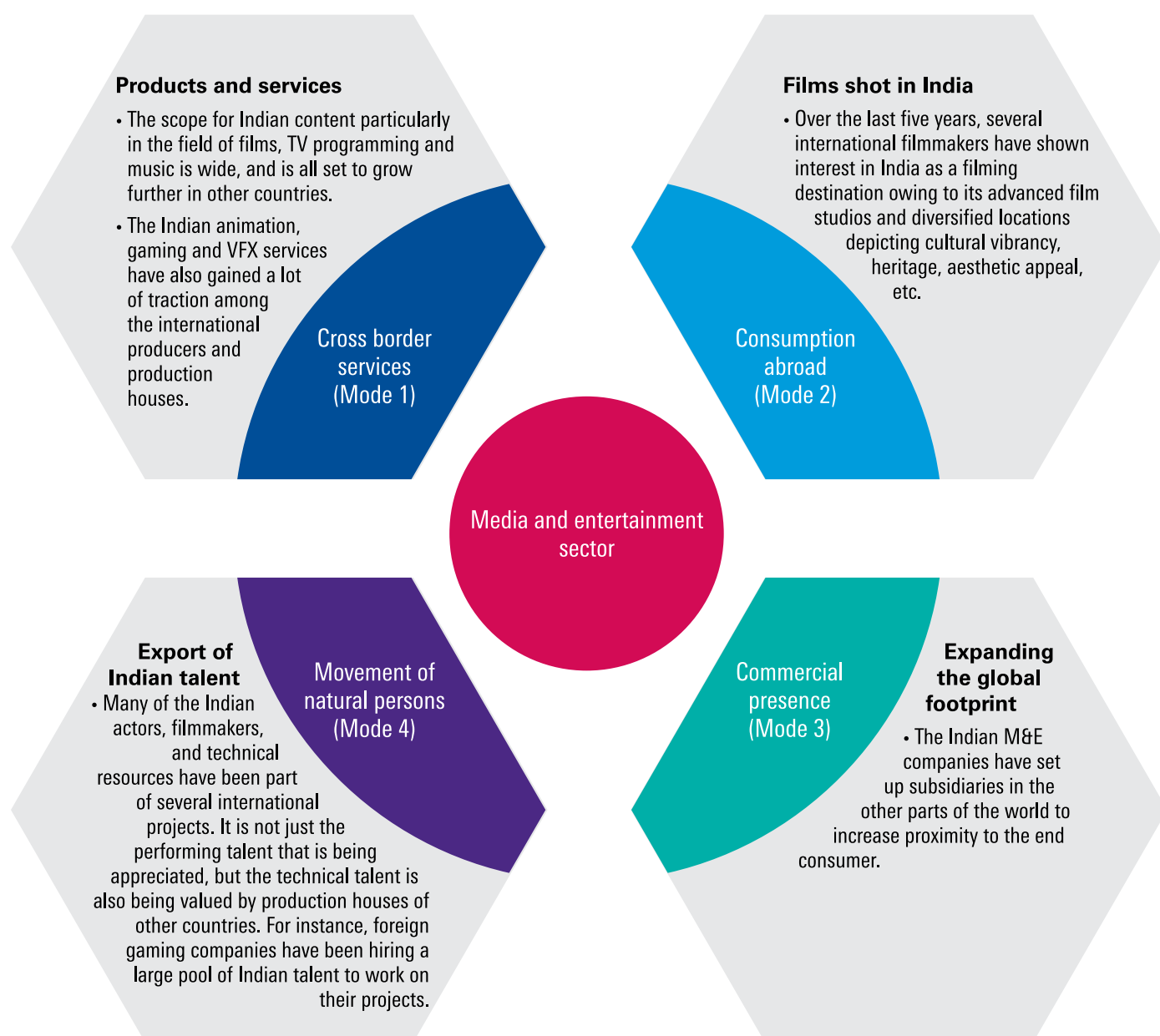
Piracy	Piracy has been a major deterrent to the growth of the M&E industry, especially to the music, films and television segments, gravely plaguing the revenue model of the entire industry, as illegitimate downloads of movies and music, and unlawful trade of CDs and DVDs take a big chunk out of the total earnings. The rising digital penetration and massive content digitisation has further amplified the challenges for the industry.
Shortage of skilled talent	The M&E industry holds immense employment generation opportunities across creative, technical and business fronts. The stable growth of the industry has given a boost to the demand for skilled workforce. However, the availability of limited skill development institutions remains a key challenge. A collaborative industry-academia-government effort is required to find, develop, retain and grow the talent to allow India to create its own mark, globally.
Stringent regulatory norms	The direct and indirect integration of the M&E industry across the sectors has helped the industry to grow and evolve. Though some stringent regulatory norms for the M&E sector has faced flak from the stakeholders across the value chain, and several initiatives by the regulatory and policy making bodies have received a warm welcome. The mandatory cable TV digitisation has enabled stakeholders to plug the revenue leakage and gain a better visibility over their operations. However, there is still room for more. For instance, a single window clearance to domestic production houses looking forward to shoot in India, incentives to promote film production, and market-based pricing for TV channels are some of the measures that can be looked into.

Source: 10 #shootingforthestars - Indian Media & entertainment report 2015; KPMG-FICCI Frames, March 2015

India's profile in the sector



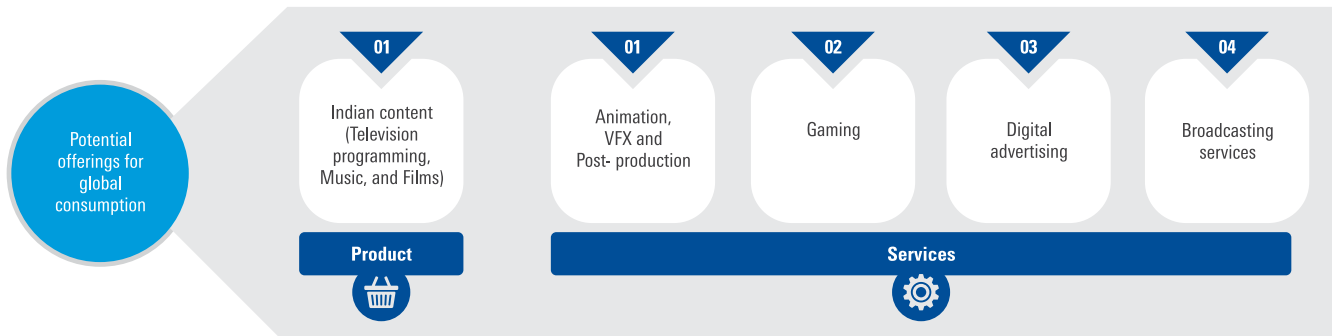
| Mode-wise potential¹⁰



Source: 11 KPMG in India's analysis based on discussions with partners and industry leaders, 2016

Mode 1: Products and services

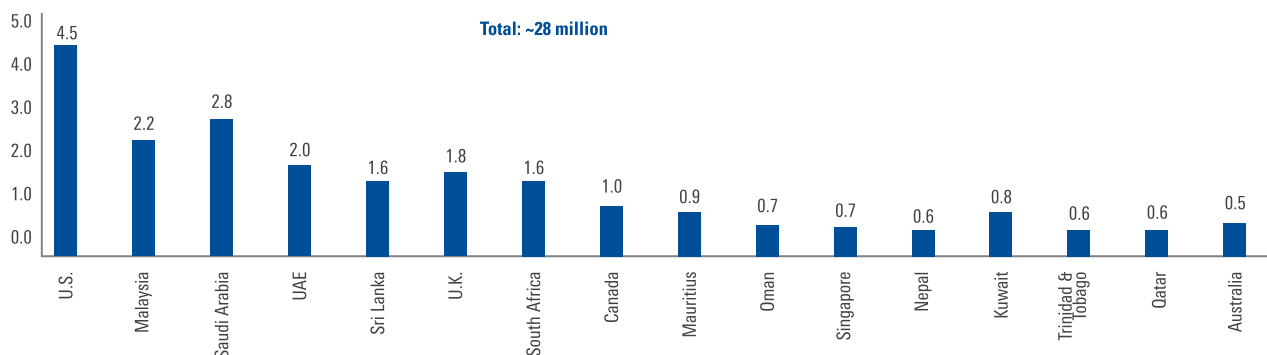
India has outranked a number of other countries to surface as the one of the most favoured outsourcing destinations¹¹. There is a gamut of high quality services available at flexible pricing options in the M&E industry, with some of the major services being content production, animation, game development, post production and VFX, and digital advertising.



Indian content: Worldwide penetration among the Indian diaspora

Content produced for Indian media segments holds tremendous potential for global consumption. With a significant diaspora population residing overseas, Indian content is a key tool for these communities to connect with their cultural roots. Content, in the form of television shows, films and music, is consumed by people in diverse geographies. This can become a striking business opportunity for market players. Moreover, with the popularity of Indian media transcending cultural barriers, more audiences are sampling Indian content, e.g. a leading Indian channel's content is syndicated in 20 foreign languages, and is spread across 100 countries¹³. Music channels are looking for opportunities in unconventional markets, such as the Middle East. For instance, a leading FM radio channel has been launched in the UAE – making it India's first ever such international association¹⁴. For films, overseas collections are an important revenue source, accounting for almost nine per cent of the total theatrical revenue¹⁵.

Estimated size of overseas community (in million)



Source: "NRISPIOS-Data (as on January 15)"; MOIA, June 2015

Source: 12 KPMG in India analysis based on discussions with partners and industry leaders

13 Source: 'The opportunity and challenges of taking Indian TV content overseas', Indiantelevision.com, http://www.indiantelevision.com/special/y2k12/Gaurav_Gandhi_yearender.htm 23 February 2012

14 ENIL joins hands with ADMC to launch Radio Mirchi in the UAE', Bestmediainfo, <http://www.bestmediainfo.com/2012/02/enil-joins-hands-with-admc-to-launch-radio-mirchi-in-the-uae/>, accessed on 25 March 2015

15 #shootingforthestars – Indian Media & entertainment report 2015; KPMG – FICCI Frames, March 2015

16 KPMG in India's analysis based on discussions with partners and industry leaders, 2016

Export potential of broadcasting services

For the Indian M&E industry, television is one of the most important sectors as it accounts for almost half the size of the M&E industry. The reach of the sector is no longer limited to the national boundaries and has expanded its footprint to other geographies as well. Several Indian TV channels have been launched in different countries across the globe. Genres such as General Entertainment Channels (GECs), movies, and music have gained their ground in the overseas markets, with viewership extending beyond the Indian diaspora. Having said that, Indian television players are rightly placed to offer the following services to international clients:

- Content syndication: Though content syndication is not an alien concept for Indian broadcasters, it is still not being leveraged upon to its full potential. India is home to over 800 channels in multiple languages, which on an average produce 10 to 12 hours of original content each week.¹⁶ With this amount of original content being produced on a regular basis, the opportunity for content syndication is significantly large. Indian players should expand their alliances to more geographies. Due to content being produced in varied languages, the language barrier is also reduced in case of countries such as Malaysia, Pakistan, and Sri Lanka.
- Content production: India has several advanced studio setups in India, in addition to qualified professionals, for various aspects of content production. Indian production houses could collaborate with their counterparts in other geographies to shoot their shows in Indian studios. The trend is also common with American TV series. For instance, several American series such as 'The Wolfman Jack Show' (1970s), 'Supernatural', and 'Arrow' have been shot in Canadian locales.¹⁷

- Broadcast channel set-up: Indian broadcasting players can play an instrumental role (particularly for less-developed nations) in every aspect of setting up a broadcasting channel. This involves:
 - Market analysis
 - Business plan preparation including Capex, Opex, resource planning, financial projections
 - Content ideation and production planning
 - Technology vendor assessment, and vendor negotiations
 - Talent acquisition and development
 - Channel branding.

Animation services

One of the segments that creates services for consumption in other countries is animation. India, among other South Asian countries, is among the most sought after markets for outsourcing these services. The Indian animation industry has witnessed a noticeable surge in the number of outsourced projects in recent years, with a major chunk of the outsourced animation work coming from studios in the U.S., Canada and Europe. While partnerships between Indian studios and foreign studios, TV channels/film producers and advertising firms, etc. are on the rise, collaborations between one or more animation studios in India have also increased significantly. The rising partnerships have majorly been an outcome of a horde of Indian studios adopting a low risk-low return business model, with the studios working either on a fixed payment basis or a time and material basis (payment based on actual hours and expenses). Indian animation studios typically have the following three business models - content production, outsourced animation services, and collaborative animation services¹⁸.

Animation service models	
Service model	Description
Integrated studio – own content	<ul style="list-style-type: none"> – Units that enable production and development of various aspects of an animated product, from conceptualisation to post-production stage. – Studios control full ownership of content, share in collections, and get royalty for all licensing and merchandising
Integrated studio-offshore facility	<ul style="list-style-type: none"> – Indian entities provide services for activities outsourced to them
Co-production	<ul style="list-style-type: none"> – Indian studios contribute manpower and infrastructure for content development, and the international producer finances the marketing, distribution, etc.

Source: 'The Stage is Set', KPMG – FICCI Frames report, March 2014

Source: 16: KPMG in India's analysis based on discussions with partners and industry leaders, 2016

17 10 TV Series That Were Shot In Vancouver, ET Canada, http://www.etcandada.com/tv/photos/10_tv_series_you_didn_t_know_were_shot_in_vancouver.aspx#!b73eda06d42f103a6b67cf95a4604257, accessed on 25 March 2015

18 Source: 'The Stage is Set', KPMG – FICCI Frames report, March 2014

Several reasons, such as cost arbitrage and the large pool of fluent English speaking population, make India an attractive destination for animation outsourcing. For instance, in 2011, overseas production houses and a leading global company had partnered with Indian animators to facilitate a full-length feature film, *Puss in Boots*¹⁹. Indian companies have also been a part of some major projects such as *'Life of Pi'*¹⁹. Off late, India has emerged as a hub for 2D and 3D animations, owing to the abundance of large pool of technically sound professionals along with the availability of modern technologies. Various studios have outsourced both pre and post-production 2D, 3D animation work to India. Additionally, companies are sourcing Indian animation for commercials and computer games. However, the share of the Indian animation sector is minute in the global pie, giving a significant headroom for growth that the Indian companies can tap into²⁰.

Post production and VFX services²¹

India is home to low-cost and well-developed post-production facilities. Foreign film producers have access to a broad spectrum of services that enable them to cut costs markedly. Some of the major post-production services outsourced to India include VFX, editing, digital archiving, designing promotional content, content and audio transformation, content restoration, titles and subtitling, etc. On account of the growth of technologically advanced studios and highly-skilled engineers, backed by advanced equipment, the Indian VFX outsourcing sector has grown immensely. A large number of companies executing outsourced projects have cropped up in Indian cities, such as Mumbai, Bengaluru, Hyderabad, Chennai, etc. These companies have moved up the value chain from performing low-end work to high quality work for foreign films, including storyboarding, product demos, banners, portraits and caricatures. This has led to a cascade of foreign companies seeking high quality and cost-effective work approaching Indian companies.

A testament to India's contribution in the global VFX space has been the recognition garnered by Indian studios working on movies such as *'Guardians of The Galaxy'*, *'Interstellar'*, *'Godzilla'* and *'X Men: Days of Future Past'*, which were nominated for the Oscars in the 'best visual effects' category in 2014. Moreover, the recent Indian movie *'Bahubali: The Beginning'* has made the world stand and take notice of Indian VFX talent.

Gaming services²²

The growing complexity, increasing quality, and the mounting costs of developing games have driven games development companies to consistently contract out vital components of their projects to India, where there is a large pool of vastly trained workforce, and the costs are comparatively lower. In addition to the lower cost, outsourcing to India enables companies to have access to specialised services such as localisation and game testing.

Outsourcing has made it possible for Indian games development companies to work with some of the best gaming companies in the world, picking up new skills and strengthening know-how of international standards along the way. This in-turn has a ripple effect in terms of creating a strong foundation for the forthcoming domestic game development companies. Furthermore, robust infrastructure and talent are the two pillars vital for growth of games development outsourcing in India. India has more than 100 institutes offering dedicated courses in game designing, game development and 3D art, that have made gaming a viable career option in the country. Over the years, a few prominent international companies have set up their development centres in India, making this sector much more attractive for the budding talent.

Digital advertising services²³

The digital advertising domain has grown at a remarkable pace in India over the last few years. Riding on the back of some major strengths such as proficiency in animation, graphic designing, text/video editing, storyboarding, etc. coupled with a colossal pool of English speaking population, India has emerged as one of the sought after destinations for outsourcing digital advertising services. While cost cutting is also one of the primary deciding factors, the facility of scaling up of operations in terms of manpower has also driven a deluge of companies towards India. Some of the major services on offer in the country include design and development of advertising collateral, development of marketing strategies, corporate advertising services, multi-channel media planning, promotional events and campaigns, and online and social media advertising services such as landing pages, articles, creative writing, and social media marketing.

Source: 19 *'Puss in Boots' showcases work by India animators for DreamWorks*, Latimes, <http://articles.latimes.com/2011/oct/29/business/la-fi-ct-dwa-india-20111029>, accessed 25 January 2016

20 *#shootingforthestars*, KPMG-FICCI Frames report, March 2014

21 *#shootingforthestars*, KPMG-FICCI Frames report, March 2014

22 KPMG in India analysis based on discussions with partners and industry leaders

23 KPMG in India analysis based on discussions with partners and industry leaders

| Select projects outsourced to/co-produced with India²⁴

Sector	Projects	Country	Services offered
Films	Pan	U.S.	Post-production
	In the Heart of the Sea	U.S.	Post-production
	Paranormal Activity: The Ghost Dimension	U.S.	Post-production
	Pixels	U.S.	Post-production
	Seventh Son	U.S.	VFX
	Guardians of the Galaxy	U.S.	VFX
	Interstellar	U.S.	VFX
	Godzilla	U.S.	VFX
	X Men: Days of Future Past	U.S.	VFX
	Garfield's A Tale of Two Kitties	U.S.	Post-production
	Shrek	U.S.	Post-production
	The Chronicles of Narnia	U.S.	Post-production
	Sin City: A Dame To Kill For	U.S.	VFX
	How to Train Your Dragon 2	U.S.	Animation
Gaming	Alien Isolation	U.K.	Game development
	Halo 5: Guardians	U.S.	Game development
	Quantum Break	Finland	Game development
Television	Mediamax Network	Kenya	Broadcasting
	Independent Television	Bangladesh	Broadcasting
	Astro Awani	Malaysia	Broadcasting
	Astro Awani	Indonesia	Broadcasting
	Ekushey TV	Bangladesh	Broadcasting

Mode 2: Consumption abroad

India as a filming destination

With over 1,500 films a year²⁵, India is the largest film producing nation in the world²⁶. Its sheer size and the number of films being released every year has made the world stand and take notice of the Indian cinema, especially Bollywood. India is home to a number of well-equipped studios with advanced technologies, offering a complete slate of pre-production and post-production services.

The film industry has established itself as an important platform for promoting tourism, especially to less known/offbeat destinations. For instance, *'Life of Pi'*, which was partly shot in Puducherry and Munnar, helped in boosting the tourist inflow to these locations and respective states²⁷. In view of the enhanced exposure and tourist demands, the state governments are making investments in regional infrastructure, hotels, connectivity, safety, etc., to increase tourism in their respective states and help establish Brand India across the globe. Incentives, ranging from tax concessions to facilitation of film shooting, are being offered by the state governments to filmmakers for shooting films in their respective states. These advantages are not limited to tourism alone, and can help in boosting the overall economy. The film industry has a lot of potential to create jobs for local residents, and thereby, ensure additional income tax and higher disposable income eventually, bringing in more money into the economy²⁸. For instance, the production of *'The Amazing Spider-Man 2'* in New York resulted in USD44 million in wages to local residents, USD1.9 million for catering, USD4 million for site fees, USD5.7 million for hotels, and USD4.5 million in taxes to the state.²⁹

In order to endorse India as a filming destination, the country has signed a number of movie co-production treaties with various countries – Italy (2005), Germany and Brazil (2007), the U.K. (2008), France (2010), New Zealand (2011), Poland and Spain (2012), Japan (2013), Canada and China (2014)³⁰. While filming in India, foreign producers can look at co-production agreements for

reaping benefits such as tax rebates, relaxed visa norms, single window clearances, ease in distribution in Indian territories, participation in Indian film festivals, and access to a common pool of creative, artistic, technical, financial and marketing resources.

One of the leading film entertainment companies in India has formed arrangements with three entertainment companies from China — including Shanghai Film Group Corporation (SFG) and China Film Group Corporation (CFG) — to co-produce, promote and distribute Sino-Indian movies across a number of platforms in both China and India. The move came in light of the Indian Prime Minister's visit to China, and is likely to cement this Indian company's place as a favoured film partner for international studios.

Two of the major projects in the pipeline include *'Xuanzang'* and *'Kung Fu Yoga'*, of which the latter is expected not only to boost the film production industry in India, but to also promote the practice of yoga³¹.

Key ingredients for attracting foreign production houses/producers



Source: 25 Central Board of Film Certification India, <http://cbfcindia.gov.in/> accessed on 25 March 2015,

26 #shootingforthestars, KPMG-FICCI Frames report, March 2014

27 LA India film council, <http://www.laindiafilmcouncil.org/>, accessed on 25 March 2015

28 #shootingforthestars, KPMG-FICCI Frames report, March 2014

29 LA India film council, <http://www.laindiafilmcouncil.org/>, accessed on 25 March 2015

30 The stage is set, KPMG-FICCI Frames report, March 2014

31 India's Eros Pacts With Three Chinese Film Entities, Hollywood Reporter, <http://www.hollywoodreporter.com/news/indias-eros-pacts-three-chinese-796501>, 18 May 2015

Key Hollywood projects filmed in India

Movie	Country	Filming destination
Zero Dark Thirty	U.S.	Chandigarh
The Dark Knight Rises	U.S.	Jodhpur
Mission Impossible 4 -The Ghost Protocol	U.S.	Mumbai
A Mighty Heart	U.S.	Pune
Life of Pi	U.S.	Pondicherry

| **Mode 3: Establishing global footprint** | **Mode 4: Movement of Indian talent**

Indian M&E companies have set up subsidiaries in other parts of the world to increase proximity to the end consumer, particularly in the animation and VFX space. However, the international presence of Indian media companies is still limited to a few countries³².

Many Indian actors, filmmakers, and technical resources have been part of several international projects. It is not just the performing talent that is being appreciated, but the technical talent is also being valued by production houses of other countries. For instance, foreign gaming companies have been hiring a large pool of Indian talent to work on their projects³³.

Source: ³² KPMG in India analysis based on discussions with partners and industry leaders

³³ KPMG in India analysis based on discussions with partners and industry leaders



Potential markets for M&E services exports

In the last few years, the U.K., the U.S., the Middle East, France, and Spain have emerged as key markets for the M&E sector, with the first three regions accounting for 70 per cent of the revenue generated by Indian movies in the overseas markets. While the Middle East market grew at a year-on-year rate of 25 to 30 per cent, even mature markets, such as the U.S., showed growth of about 5 to 10 per cent, primarily due to the high number of Indian diaspora in these markets³⁴.

Hollywood production houses were one of the first to outsource their animation and post production work to India. Now, production houses from many other countries, such as the U.K., Canada, France and Spain, have started outsourcing their animation and post production requirements to the subcontinent. Several movies, such as 'Garfield's A Tale of Two Kitties', 'Shrek' and 'The Chronicles of Narnia' got their post-production process completed by an Indian company. For the Oscar award winning movie 'The King's speech', post production and VFX work was executed by Pixon – an Indian company that offers post-production services³⁵.

India has been a destination for filming Hollywood projects. In the recent years, Hollywood movies such as 'Eat Pray Love', 'Zero Dark Thirty', 'The Dark Knight Rises', 'Mission Impossible 4 - The Ghost Protocol' and 'A Mighty Heart' were shot in India. In fact, a prominent international production house in collaboration with an Indian company is exploring the possibility of shooting 'Immortals 2' entirely in India³⁶.

South-east Asia is amongst the fastest growing regions in terms of the gaming industry, and thus, western companies have established their local offices in the region to produce localised content. Indonesia and Vietnam are two of the major countries that house the highest percentage of mobile game spenders across the region. With a major chunk of Indian studios developing games for smartphones and tablets, there lies a huge opportunity for Indian game developers to cash in on the increasing demand from the South-east Asian region³⁷.

In 2006, the Regional Radiocommunication Conference (RRC) was organised in Geneva for 119 countries belonging to the International Telecommunication Union (ITU) to deliberate on TV digitisation and establish a plan for switching off analog signals. At the conclusion of the conference, a deadline of June 2015 was set for countries that operate in the Ultra High Frequency (UHF) band, and June 2020 for countries for those that operate in the Ultra Very High Frequency (VHF) band. Digital television broadcasting first began in late 1990's, introducing the world to the era of full digitisation in the television broadcasting space. By the end of 2015, according to ITU data, only four African countries — Malawi, Mauritius, Mozambique and Rwanda — out of 54 countries had completed the switchover to digital signals. Currently, TV digitisation is underway in India, and as a result the country is already witnessing an increase in the number of TV channels. India could leverage upon key learnings from the ongoing phased-digitisation process and projects involving setting-up of new TV channels to assist African countries with a number of broadcasting services³⁸.

Source: 34 #shootingforthestars - Indian Media & entertainment report 2015', KPMG-FICCI Frames report, March 2015

35 India: The World's Animation Outsourcing Hub', Bric Expansion, May 2012

36 Relativity Media upbeat on Make In India; could shoot 'Immortals' in India', Indiantelevision, <http://www.indiantelevision.com/specials/event-coverage/ficci-frames/relativity-media-upbeat-on-make-in-india-to-shoot-immortals-in-india-150325>, accessed on 25 March 2015

37 KPMG in India analysis based on discussions with partners and industry leaders

38 International Telecommunication Union, https://www.itu.int/newsroom/press_releases/2006/11.html, accessed in 25 March 2015

Demand



| Demand for M&E services

India's profile in the sector

India holds a reputation of delivering stunning work at low cost, especially in the area of international television programming. The cost of animation production in India is one-fourth to that of North America, whereas its counterparts such as Korea and the Philippines offer services at two-thirds the cost to that of North America³⁹.

Further, the competitive position in terms of labour cost has made India a preferred outsourcing destination hub. According to a NASSCOM study, 'Strategic Review 2014', entry level salaries in India are eight to ten times cheaper than the source countries⁴⁰. The U.S., Canada, Australia, the U.K., Italy, France and Spain are some of the prominent examples of countries outsourcing animation and VFX work to India. Mumbai, Hyderabad, Chennai, Bengaluru, and Trivandrum have emerged as major Indian animation hubs.

| Cost savings potential offered by India across a number of M&E services⁴¹

3D Modeling	Up to 40%	Animation production	Up to 75%* Up to 35%**
Data entry and data cleansing costs	Up to 40%	Audio/Video transcription	40-60%
Multi-lingual services	40-50%	Layout services (Print sector)	35%
Printing services	Over 40%	Virtualization of content supply chain of a broadcaster	Over 30%
Offshore reporting & editorial	30-40%	Offshore ad production	40-60%
Digital services	Up to 40%	Technology services	Up to 40%
<ul style="list-style-type: none"> • Content conversion/digitization (of hardcopy, microfilm or digital files) for web • Content creation and XML content transformation • Development of online PDFs, e-zines, e-books or other digital documents • Web hosting • Social media application and content development • Digital content distribution models 		<ul style="list-style-type: none"> • Digital asset & content management • Content digitization/ transformation/ fabrication • Finance, subscription management • Search engine optimization (SEO) • Access control and commerce systems • Website directory services • Web analytics • Website portal management 	

Note: *for North America; **for Korea and Philippines

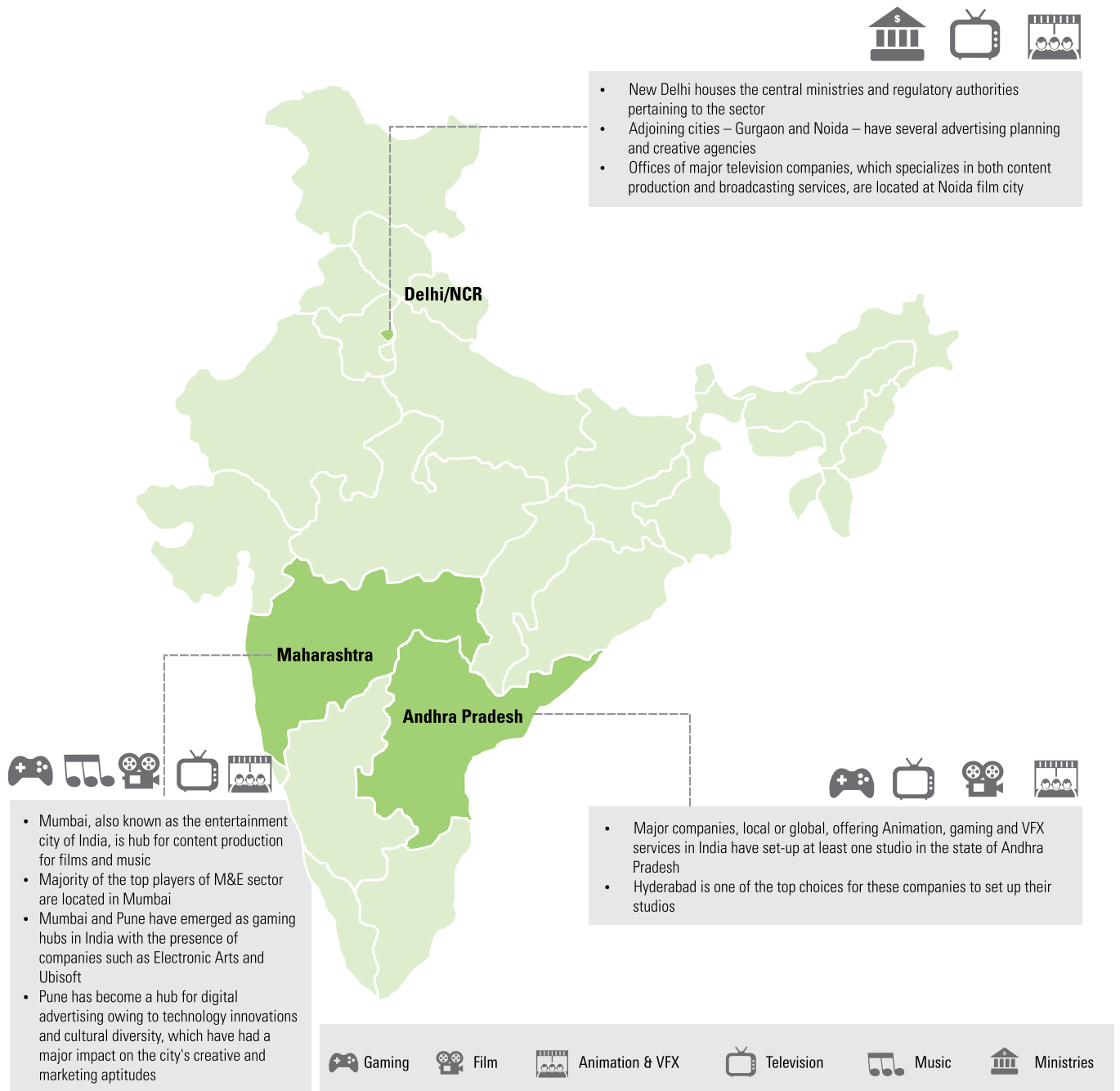
Source: 39 #shootingforthestars- Indian Media & entertainment report 2015', KPMG-FICCI Frames, March 2015

40 'The IT-BPM Sector In India: Strategic Review 2014', NASSCOM, 2014

41 <https://www.wizscribe.com/>, <https://www.backofficepro.com/>, accessed on 25 March 2015

Clusters of M&E services⁴²

While the reach of media and entertainment is pervasive across states in India, players tend to be clustered in certain key locations – Maharashtra, Andhra Pradesh, and Delhi (including the NCR region).



Mumbai could be an ideal location for setting up a centre for stakeholders' consultation in India, as a majority of industry's leading players have their head offices situated there. Most of the content for films, television and music is produced here. Mumbai is also the economic capital of the country, which could further smoothen the process of exports⁴².

Source: 42 KPMG in India's analysis based on discussions with partners and industry leaders, 2016

| **Case study**⁴³

One of India's leading animation, VFX and digital solutions firms, which was started by a few young individuals in 2000, today employs over 4,500 professionals across the globe. The company is not only working with the leading players in India, but has also established its brand name within the global production houses. Over the years, the company has also worked with top broadcasting networks.

Differentiators:

- **Global M&A focus:** When most of the major players were looking for outsourcing work from clients abroad, this company acquired several digital services companies located across the globe – London, Los Angeles, Vancouver, New York, to name a few. The move provided them with an edge over their competitors as they were now seated at the epicentre of all the action.
- **Unified branding:** The company further moved on to set up a unified global brand for itself, that generated confidence among the stakeholders.
- **Monetising technology:** The company did not restrict itself to animation and post production services, instead they also ventured into technology services primarily involved in simplifying the movie making process.

Success stories:

- The company has worked with several leading film and television production houses.
- Some of their work includes movies such as '*Gravity*', '*Marvel Avengers- Age Of The Ultron*', '*Seventh Son*' and '*Guardians Of The Galaxy*'. The company has also worked for the studio re- release of '*The Wizard of Oz*'.
- In 2014, the company delivered VFX and 3D conversion services to a film project '*Sin City: A Dame To Kill For*'. A team of 550-600 VFX professionals worked from India to produce 2,000- 2,300 VFX shots. The same team supervised other productions aspects of the film too.
- In 2015, the company won its first Academy award.

Future plans:

The company plans to accelerate its growth and increase its revenues from global clients. While in case of digital services verticals, only 20 per cent of its total revenue is generated from the Indian clients, the number stands close to 75 per cent in case technology services vertical. Therefore, the company plans to focus on increasing the share of overseas revenues in the overall pie in case of the latter vertical as well.

Strategies to promote growth⁴⁴

Past	Present	Future
Individual companies have been promoting their services to other countries.	<ul style="list-style-type: none"> – Individual companies continue to promote their services to other countries – Some of the state governments provide support for domestic growth, however, insufficient support is focussed towards expansion of international footprint – Strategic tie-ups have been formed with a few countries for co-production of audio-visual content primarily in the areas of films and TV programming – Recognising the growth potential of animation and VFX services, the government of Karnataka drafted the policy for the Animation, Visual Effects, Gaming and Comics (AVGC) sector in 2012. The new policy was primarily focussed on bridging the gap between demand and supply that existed in the market, and for winning share in the global outsourcing and IP generation by attracting work from global players. – Taking a cue from Karnataka, other South Indian states also drafted policies to provide the much required impetus to animation and gaming sector in their states – In 2013, Annual Graphics and Animation Film Awards (AGAFAs) initiative was launched to encourage animation and creative services in India 	<p>There are several proposed changes which could help the industry grow. Some of them are:</p> <ul style="list-style-type: none"> – Providing industry status to the animation and gaming industry in India so that focussed organisations can have undivided priority for the said sector – Providing a 10 year tax holiday to animation companies – Assisting the grooming of entrepreneurs with market development and sales enablement across international markets – Andhra Pradesh is working towards building a 'GAME City' in Hyderabad, inspired by the Dubai Media City and Media City U.K. in Manchester – The government of Maharashtra is working towards bringing animation, VFX, gaming and comics industry at par with the IT and ITES sectors by providing similar benefits (including 100 per cent exemption in stamp duty, waiver in electricity duty, property tax at par with residential rates, exemption in entry tax, Works Contract Tax at the minimum rate, and VAT at floor rate) from April 2015 onwards⁴⁵. – Awarding industry status to the cable sector for the smooth implementation of the remaining phase of digitisation could help achieve the National Broadband Plan.

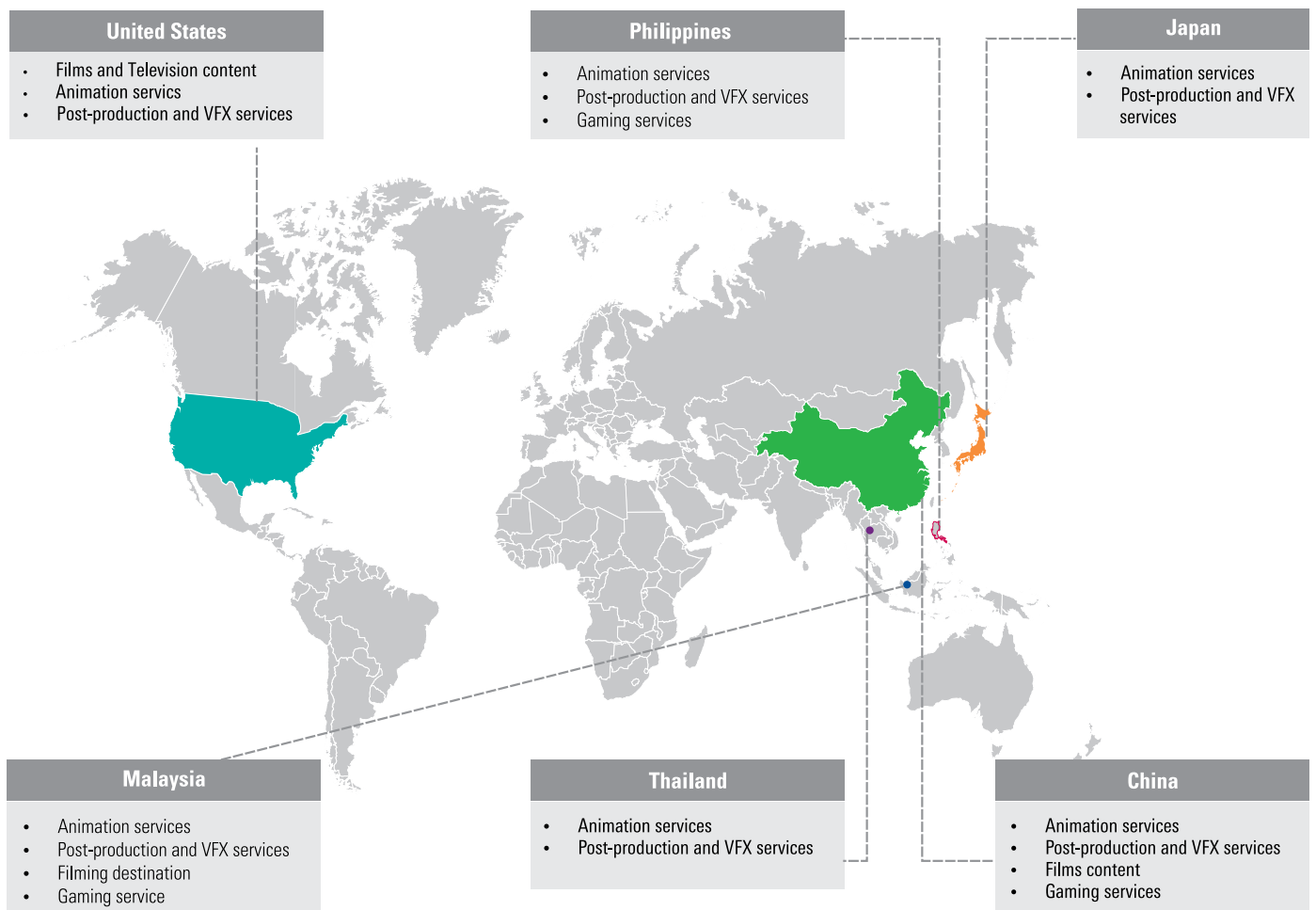
Source: 44 The stage is set - Indian Media & entertainment report, March 2014', KPMG-FICCI Frames, 2014, KPMG in India's analysis based on discussions with partners and industry leaders, 2016

45 Draft policy aims to make Maharashtra animation, gaming hub', Business Standard, http://www.business-standard.com/article/current-affairs/draft-policy-aims-to-make-maharashtra-animation-gaming-hub-115011400399_1.html, accessed on 25 March 2015

Competition



| Competing with India⁴⁶



Source: 46 KPMG in India's analysis based on discussions with partners and industry leaders, 2016

Global practices⁴⁷

Animation and VFX services	<p>Government-driven incentives and grants are making countries such as Malaysia, China and Philippines an attractive outsourcing destination compared to India.</p> <p>Malaysia: The government provides incentives such as content funding, entertainment tax rebates, creation of an investment arm for debt and equity funding, and grants to SMEs to defray high export promotion cost⁴⁸.</p> <p>China: The government has introduced preferential VAT and Business Tax (BT) policies, subjecting animation enterprises to 17 per cent VAT for the domestic sale of manufactured animation software, and a 3 per cent VAT exemption on animation software export⁴⁹.</p>
Filming destinations	<p>Governments of various countries have recognised the potential of leveraging films for promoting tourism. Thus, incentives have been announced for attracting foreign filmmakers to shoot their films in the respective countries.</p> <p>Ireland: In July 2013, Ireland Tourism, in conjunction with both Northern Ireland Screen and the Irish Film Board, arranged an extensive location scout for Bollywood producers to showcase the island of Ireland⁵⁰.</p> <p>Malaysia: The central film agency offers technical expertise and services for film productions and rebate on production costs to eligible film⁵¹.</p> <p>United States: State film commissions offer film production, post production and commercial credits⁵².</p>
Content consumption	<p>Content consumption has evolved with the rise of digital platforms. Consumers have started giving precedence to quality. The governments too have realised the importance of the content for the growth of the industry.</p> <p>China: The Ministry of Finance (MOF) and the National Development and Reform Commission have earmarked an annual spend of USD163 million (CNY1 billion) to support the domestic film industry especially the film productions and digital cinemas construction. The industry friendly policies have led to an upsurge in the number of screens and the feature films being produced in the country⁵³.</p>
Gaming services	<p>China: China's services sector has been moving up the value chain. Low skill and high volume tasks are slowly getting replaced with high-end services, including game development, with capabilities being built across various industries.</p> <p>Both national and state governments have declared several policies for the propagation of outsourcing services. For instance, Shanghai has built several establishments —such as Zhangjiang Hi-tech Park, Lujiazui Finance and Trade Zone and Hongqiao Economic and Technological Development Zone – for enhancing the scope of outsourcing work in the areas of films, TV, game and application software development⁵⁴.</p>

Source: 47 KPMG in India's analysis based on discussions with partners and industry leaders

48 #shootingforthestars- Indian Media & entertainment report 2015; KPMG-FICCI Frames, March 2015

49 www.Chinabriefing.com, accessed on 10 March 2015,

50 Bollywood producers arrive, hoping to repeat success of 'Luas fight' blockbuster; *Journal.ie*, <http://www.thejournal.ie/bollywood-ireland-location-scouts-1006170-Jul2013>, accessed on 25 March 2015

51 LA India Film Council, <http://www.laindiafilmcouncil.org/>, accessed on 25 March 2015

52 LA India Film Council, <http://www.laindiafilmcouncil.org/>, accessed on 25 March 2015

53 China to spend \$163 mln a year to support movie industry; *Reuters*, <http://www.reuters.com/article/china-film-idUSL4N0P02V320140619>, accessed on 25 March 2015

54 Outsourcing Destinations in China; KPMG in China, September 2013

China —way ahead of India in terms of cinema screens⁵⁵

Though the Indian film industry is the largest in the world in terms of number of films being produced each year, it lags far behind in being considered a world leader in terms of infrastructure. With just seven screens per million population, the underpenetration of cinema screens has become a worrisome factor for the industry. On the contrary, the U.S. boasts of about 125 screens per million population.

China, currently, stands at 13 screens per million population. However, it is adding 18 screens per day and is estimated to be at par with the U.S. in terms of screen count in the next three years. This has been made possible with concerted efforts of governments and the State Administration of Radio, Film and Television (SARFT). Recognising the potential benefits the film industry can reap for the overall economy, the Chinese government has been increasingly emphasising on the industry's growth. Initiatives ranging from industry-wide financing, subsidies for development of digital screens, tax exemptions, talent development programmes, to a dedicated film fund have helped the film industry sustain fast-paced growth and attract investments from players not belonging to this industry.

While the advent of multiplexes over the last several years has radically transformed the film exhibition space in India, there still remains a massive opportunity for a brisk increase in the number of cinema screens over the next decade. In addition to having a superior screen density, Chinese companies have been making inroads into the U.S.

- In 2012, China-based Wanda cinemas acquired AMC Theaters in a deal worth USD2.6 billion. In 2015, the former set-up headquarters for its North American entertainment business in Beverly Hills, California.
- In 2014, China's internet-giant Alibaba partnered with Lionsgate to launch a streaming service, Lionsgate Entertainment World, exclusively accessible on set-top boxes provided by Alibaba

Source: 55 #shootingforthestars- Indian Media & entertainment report 2015; KPMG-FICCI Frames, March 2015 2016



| Enhancing M&E exports from India⁵⁶

India is home to one of the fastest growing M&E industries in the world. With its exotic locations, abundant labour force and growing demand for original content, India stands to gain a favourable advantage in the global M&E space. However, a proactive private-public collaboration is required to achieve a prominent position in the M&E sourcing industry. Following are some of the steps likely to help India gain a competitive edge:

Setting up of national film commission	A nodal body – primarily responsible for promoting, marketing and developing India as a destination for film and television production – should be set-up under the PPP model.
Promotion of local talent at the global stage	Global exposure has helped Indian talent, such as singers, actors, directors and technicians, to work with their international counterparts. Considering cross-country collaboration is a potential revenue generator, the Indian M&E industry should work towards promoting local talent at a global level.
Development of globally accepted content	While locally produced content is making inroads among the Indian diaspora worldwide, it is yet to gain foothold in the area of universally accepted storylines. Development of content that resonates with global audience, dubbed/subtitled in a consumer's native language can boost the demand for Indian content from non-Indian diaspora too.
Alliances with international production houses	<p>The amount of investment by Indian production houses continues to be negligible compared to the international productions in the West. Partnerships and co-production agreements can be explored by Indian productions houses to:</p> <ul style="list-style-type: none"> – Mitigate the risk – Promote India as a filming destination – Develop and remodel the content for global acceptance – Learn and embrace favourable operating practices to foster growth.
Measures to promote animation and VFX content	<p>The Indian animation industry continues to be on the back foot owing to lack of original content, absence of employable resources, piracy and insufficient industry support. The focus on original content development, skill development, incentives and promotion of domestically produced content can go a long way to put India on the global map as a key partner for this segment.</p> <p>The Indian animation industry could considerably benefit from government support through measures such as reservation of a certain number of hours for domestically produced content on channels, tax benefits and treaties.</p>
Reform the television space	The Indian television sector is caught up in a time warp with stringent regulations that impact monetisation and freedom to contract. Further, with no clear policy on media ownership, the sector is in dire need of funding. In order to take television to the next level it is imperative that TV channel prices are subjected to market forces rather than artificial ceiling. A concerted effort should be launched to fight cable and online piracy through a cogent IP policy, and a clear stand needs to be taken on ownership and entry criteria as recommended by TRAI. More transparency has to be ensured at the last mile in order to plug revenue leakages, and cogent standards need to evolve for content and technology protection.

Source: 56 KPMG in India's analysis based on discussions with partners and industry leaders, 2016; Industry discussions conducted by CII, April 2015

| Foreign Direct Investment

With recent developments, India can be positioned as the country with one of the most liberal investment climates around the world with an encouraging Foreign Direct Investment (FDI) environment. The media and

entertainment industry has considerably leveraged upon this liberal regime, with several segments in the industry permitting investment from abroad

Segment	Sub-segment	Old limits/approval route	New cap and approval route
TV Distribution	Teleport/DTH/HITS/IPTV/ Mobile TV	74% Up to 49% – automatic route Beyond 49% – FIPB (full form please)route	100% Up to 49% – automatic route Beyond 49% – FIPB route
	Cable networks (MSOs) operating at national or state or district level and undertaking up Uplinking of ‘non-news and current affairs TV		
	Cable Networks (Other MSOs not undertaking upgradation of networks towards digitization with addressability and Local Cable Operators (LCOs))	49% Automatic Route	100% Up to 49% – Automatic route Beyond 49% – FIPB route
TV Broadcasting	Downlinking of TV Channels	100% Through FIPB Route	100% Automatic Route
	Uplinking of ‘non-News and Current Affairs TV Channels’		
	Uplinking of ‘News and Current Affairs TV Channels’	26% Through FIPB Route	49% FIPB route
Radio	FM Radio		
Animation, gaming and VFX	Animation, gaming and VFX	100% Automatic Route	

According to the Department of Industrial Policy and Promotion (DIPP), the information and broadcasting industry (including print) witnessed FDI inflow of USD4.6 billion between April 2000 and December 2015⁵⁷, which is approximately 1.6 per cent of the total FDI received during the same period.

Strengths and opportunities⁵⁸



Strengths

- Both central and state governments have earmarked a certain percentage of their respective budgets for developing media institutes and training centres to curb the shortage of skilled professionals in the M&E sector
- India provides a huge cost advantage to the outsourcing clients. For instance, the cost of animation production in India is one-fourth to that of North America
- Increased consumption of niche and HD content have resulted in increased subscription revenue from not only India but other geographies too, depicting increasing demand for Indian content
- Favourable state-owned policies and liberal FDI reforms are further supporting the foreign investments in the country.

Opportunities

- The growth of young population worldwide has triggered a shift towards digital platforms and content. Recognising this opportunity, Indian content is increasingly being made available on digital platforms to reach out to wider audience spread across the globe
- Strong outsourcing activities and co-production alliances are likely to result in increased demand for animation/VFX/ gaming work.
- The government too has shown interest in making India a favoured filming destination by signing co-production treaties with more countries and simplifying the process of shooting in India
- The introduction of long-awaited 'single window clearance' for shooting films at pan-India level is likely to attract foreign filmmakers for filming in India.

I Enhancing M&E services exports from India – assistance to Indian firms⁵⁹

The role of center and state governments in the growth of India's media and entertainment space is paramount. There are still challenges such as skill development, piracy and stringent policies that need to be addressed in order to make India the go to destination for media and entertainment offerings.

Inviting foreign production houses to India	Indian authorities could work on a systemic format to invite production houses from across the globe to visit studios and locations in India.
Single window clearance	The Ministry of Information and Broadcasting has already taken steps to facilitate producers to make India a prime location for shooting. In addition, a single point of service should be created to complete required formalities so that the willing production houses do not face any difficulties. Complete information about the processes and facts should be made available online at a single place.
Bridging the skill set gap	While some state governments have announced training institutes, incubation centres for budding talent, M&E courses, etc., there is dire need for the central government to get involved and announce a few nation-wide programmes and initiatives.
Assistance in adopting new technology	Government should have regulations to encourage the use of recent technologies in content production, marketing and distribution.
Stringent policies against cyber theft and other forms of piracies	Regulations against cyber theft should be made more stringent, in order to reduce the probability of content piracy. Weak IP regulations and ineffective enforcement discourages players from producing their own IP, thereby adversely impacting the quality of locally produced content. The signal piracy in the case of cable TV industry affects both industry and government revenues. There has to be a concerted effort to fight piracy in all its shape and forms.
Develop 'Brand India'	Efforts are required from the government to establish India as a soft power in the M&E sector.
Ease restrictive regulations and laws	Allowing market forces to determine channel prices, ensuring that signals of live sports event of national importance are only made available to Prasar Bharati's own terrestrial channel and shall help build confidence.

The M&E sector in India is poised for exciting times, powered by the growth in digital media consumption, and the supporting environment created by regulatory reforms. Collaboration across players may remain key to success. The momentum generated by regulatory reform needs to be underpinned by strong implementation on the ground and partnership across the value chain.

Source: 59 KPMG in India's analysis based on discussions with partners and industry leaders, 2016

Regulatory architecture

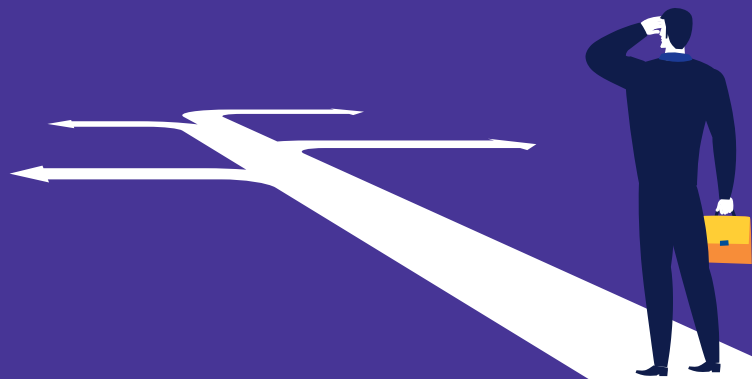


Accreditation	– Central Board of Film Certification (CBFC)
Licensor/ regulators	– Ministry of Information and Broadcasting (MIB) – Telecom Regulatory Authority of India (TRAI)
Acts	– Cable Television Networks (Regulation) Act, 1995 – The Sports Broadcasting Signals (mandatory sharing with Prasar Bharati) Act, 2007 – The Prasar Bharati (broadcasting Corporation of India) Act – The Registration of Newspapers (Central) Rules, 1956 – Press Council Act, 1978 – Draft Cinematograph Bill, 2010 – The Cinematograph Act, 1952 – The Copyright Act

I Federations

Films	– National Films Development Corporation (NFDC) – The Film & Television Producers Guild of India – Film Federation of India – Indian Motion Picture Producers' Association – Motion Picture Distributors Association (India)
TV Broadcasting	– Indian Broadcasting Foundation
Animation, VFX, and Gaming	– The National Association of Software and Services Companies (NASSCOM) – The Association of Bangalore Animation Industry (ABAI)
Advertising	– Advertising Agencies Association of India (AAAI) – Advertising Standards Council of India

Future outlook⁶⁰



Animation, VFX and post production

A few services in the value chain of the animation and VFX industry in India are still emerging or are in their infancy, with respect to exports. This is a huge opportunity for Indian companies to design solutions in these segments and capture the global market. In the animation and VFX segment, India is actively providing production solutions only in terms of content development or post production work. However, there is a huge opportunity for companies to design solutions and capture share in the global market, which can be achieved through the following steps:

- Provide an effective approach to address requirements from concept ideation to marketing of the end-product
- Assistance in fund raising and IP acquisition
- Assistance in pre-production activities such as character finalisation
- Assistance in promotion, distribution, video release, cinema and TV screening.

These can be in addition to the current services that India is providing, such as sound recording, editing, visual effect, paint and background. Indian animation and VFX industry can follow any of the three models (as depicted in the figure) to function in the global market.

Currently, a prevalent model is outsourcing, whereas co-production, and IP creation models, are quickly catching up. Indian companies, to increase their visibility in the global market, should increase their contribution in IP creation and co-production models, since these can allow them to utilise the full potential at various levels of the value chain.

Out sourcing model	Co-production	IP creation
High Volume – Low Value	Shared risk model	High Risk – High Return

India as a filming destination

The Indian M&E players should promote India as a filming destination, not only by highlighting the diverse natural beauty of the country, but also advanced studio infrastructure in the subcontinent. Over the last few years, Malaysia has developed several studios, which plans to spend USD2.43 billion in film production between 2013 and 2020⁶¹.

Gaming

While the gaming outsourcing space in India has witnessed a healthy growth over the past few years, more needs to be done in order to make the country a preferred destination for game development and other related services. Efforts could be made to up the service value, which is likely to bring more offshoring work to India. Original IP development in the domestic market, which has yet to pick up, should be given more importance so as to increase the demand of original content from India. Continuing to make gaming a viable career option could also go a long way in terms of building a solid foundation for the game development service space in India.

Digital advertising

With the slowing down of the online ad business space, video and mobile ads are expected to witness increasing growth, breaking away from text-based/static ads. Increasing mobile usage and smartphone penetration are likely to lead to an increase in mobile spending, propelling the growth of the digital ad market. This presents a huge outsourcing opportunity for companies in India in terms of positioning their services, so as to make the most out of this evolving market.

Source: ⁶⁰ KPMG in India's analysis based on discussions with partners and industry leaders, 2016, 'The stage is set - Indian Media & entertainment report 2014', KPMG-FICCI Frames, March 2014

⁶¹ 'Pinewood Studios brings movie magic to Malaysia', Permandu, http://etp.pemandu.gov.my/Global_Recognition-@-Pinewood_Studios_brings_movie_magic_to_Malaysia.aspx, accessed on 25 March, 2015

Small and medium enterprises



Small and medium enterprises in M&E services⁶²

The Micro, Small & Medium Enterprises Development (MSMED) Act 2006, defines services sector as the enterprises with investment in equipment limited to INR5 crore. Since a lot of the equipment is either on lease or rent, the M&E industry does not fall under the purview of the standard MSME sector. Apart from films and television production, other segments pre-dominantly have only five to ten large players with medium and small sized companies forming the rest. Advertising agencies (creative, release or PR), except for a few big ones, are largely medium or small scale companies. However, the industry has seen some consolidation in some of the sub sectors, especially in the film exhibition and TV distribution space.

Opportunities⁶²:

Skill development institutions: India continues to struggle due to lack of skilled workforce in the Indian M&E industry. Investments and government support can help in the development of institutes for skill development in animation VFX, and other segments of the M&E industry.

Content dubbing opportunity: Establishment of the dubbing studios can facilitate the growth of content syndication to other countries.

Growth of live events: Live events are a highly fragmented and growing sector of the Indian M&E industry. The acceptance levels are high amongst the Indian audience for live events. Adequate support to this segment can bolster the growth of MSMEs in the areas of event management, marketing and advertising, etc.

Increase in screen penetration in India: The low screen penetration in India is a huge window of opportunity for MSMEs, especially in smaller towns and cities. Several smaller players have invested in two-screen movie theatres spread over an area of 5,000 to 6,000 square feet⁶³.

Digital dawn: The growth of digital consumption has opened up a plethora of new opportunities for MSMEs. The low investment and high volume segment has created significant opportunities in the areas of digital advertising, mobile commerce, digital content, etc.

Source: 62 KPMG in India's analysis based on discussions with partners and industry leaders

63 Double Impact', Business Today, April 2014

The space sector



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Sector overview

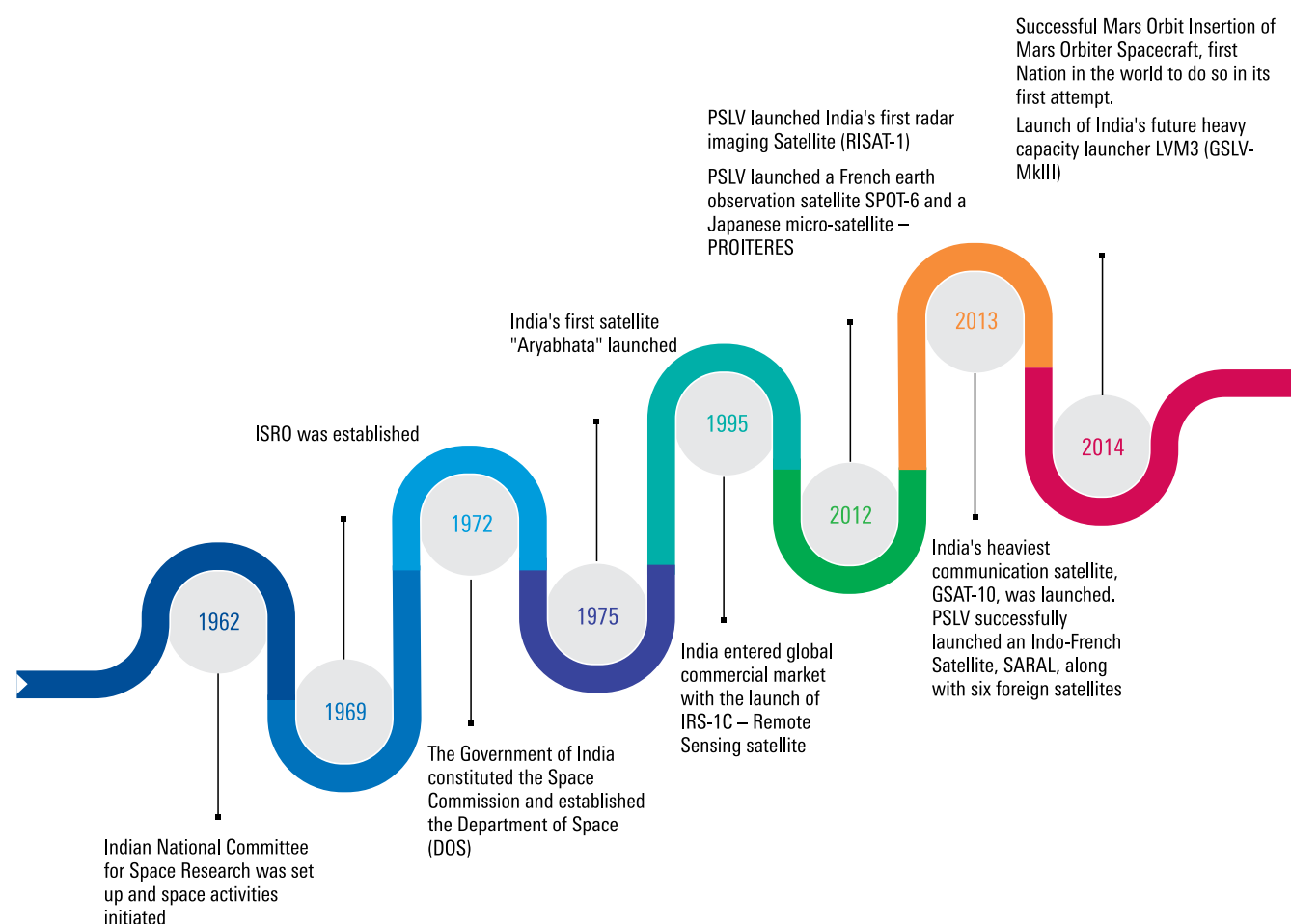


1.1 Current state of the Indian Space sector

India has an ambitious and enterprising space programme aimed at developing independent capabilities and indigenous technology. The Department of Space is responsible for all activities in the space sector in India and manages the Indian Space Research Organisation

(ISRO), which falls under the direct authority of the Prime Minister. ISRO has formed an entity under its control, which is the marketing arm and plays a pivotal role in delivering space systems and services to clients across the world¹.

Brief history of the Indian space programme²:



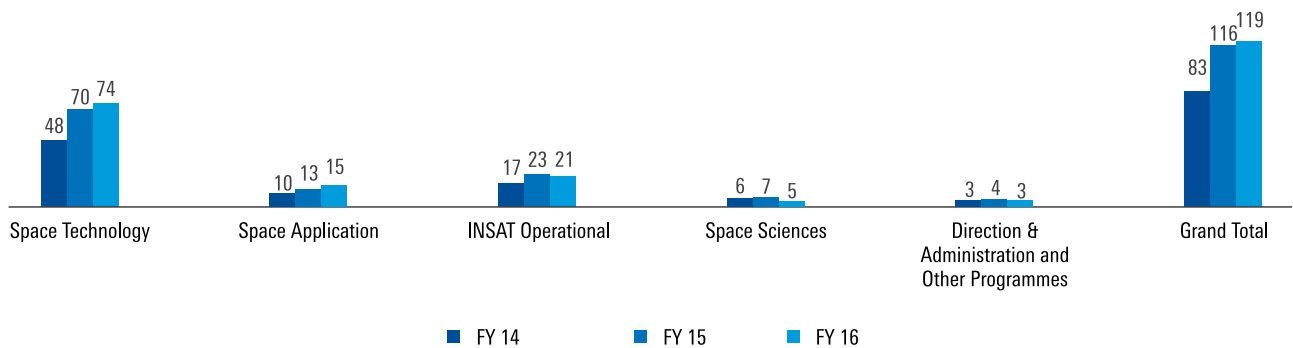
Source: 1 Antrix, accessed 02 April 2015 <http://www.antrix.gov.in/>;

2 Statistics, Make in India accessed 02 April 2015 <http://www.makeinindia.com/sector/space/>

The 12th Five-Year Plan allocated USD7.4 billion to the Department of Space. In FY17, ISRO's budget estimate is expected to be USD1.1 billion.³ The main objectives till 2025 include the following:

- the strengthening/expansion of services in communications and navigation
- developing enhanced imaging capabilities for resource management, weather and climate change analysis
- space science missions for developing a better understanding of the solar system and the universe
- space exploratory missions
- development of heavy lift launcher and reusable launch vehicles; and a human space flight programme.

India's space sector budget (USD million)



Source: Department of Space website, Government of India, April 2015

With the 12th Five-Year Plan that includes 25 launch vehicle missions and 33 satellite missions, a number of challenging technology and facility developments, the horizon and opportunity for the industry is wide.⁴

Source: 3 ISRO To Double Missions To 12 Per Year, NDTV, 18 February 2016 <http://www.ndtv.com/india-news/isro-to-double-missions-to-12-per-year-1278561>;

4 Business Standard, ISRO plans 58 space missions during 12th Plan, accessed 02 April 2015 http://www.business-standard.com/article/pti-stories/isro-plans-58-space-missions-during-12th-plan-112100700132_1.html;

International cooperation and trade⁵

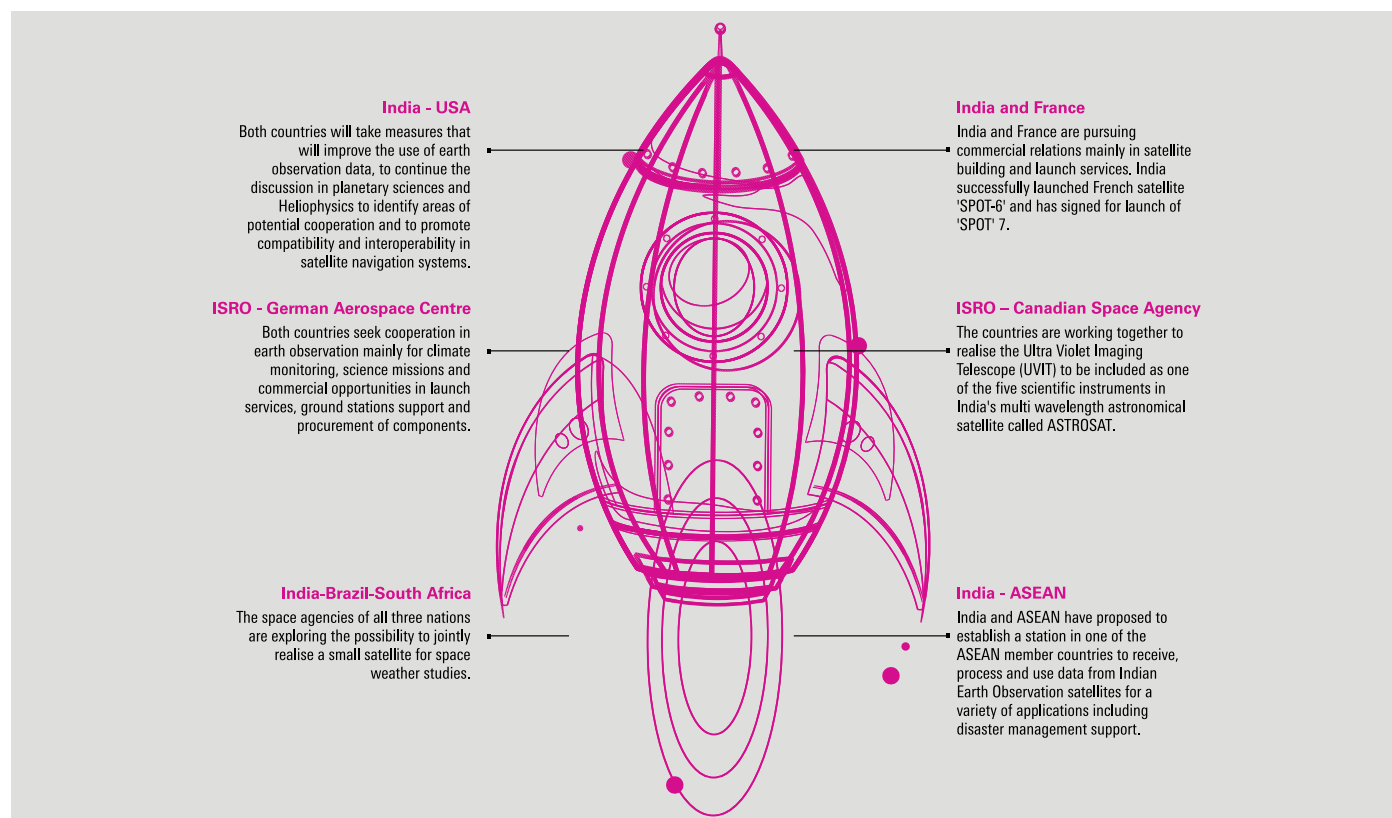
Formal collaborative arrangements are currently in place with three multinational bodies and space agencies of 33 countries.

Partner Agencies: European Centre for Medium Range Weather Forecasts (ECMWF), European Organisation for Exploitation of Meteorological Satellites (EUMETSAT), European Space Agency (ESA).

Partner Countries: Argentina, Australia, Brazil, Brunei Darussalam, Bulgaria, Canada, Chile, Egypt, France, Germany, Hungary, Indonesia, Israel, Italy, Japan, Kazakhstan, Mauritius, Mongolia, Myanmar, Norway, Peru, Republic of Korea, Russia, Saudi Arabia, Spain, Sweden, Syria, Thailand, the Netherlands, Ukraine, the United Kingdom, the United States of America and Venezuela.

India has launched 57 satellites for 20 countries.⁵

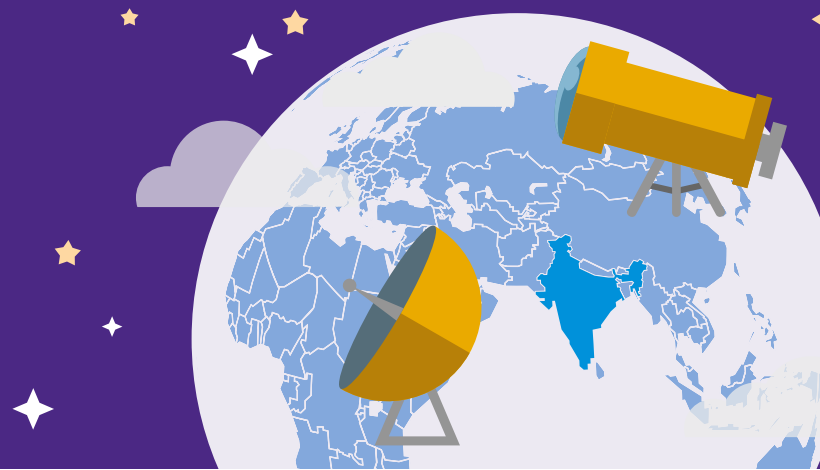
The areas of cooperation mainly involve remote sensing, satellite communication, launch services, telemetry and tracking support, space exploration, space law and capacity building⁶.



Source: 5 ISRO launches six Singapore satellites, *The Hindu*, 17 December 2015

6 International Cooperation, Department of Space, accessed 02 April 2015 <http://dos.gov.in/node/103>;

Services that India can offer⁷



Through Antrix Corporation Limited, India offers a range of commercial space-related services to clients across the globe.

Antrix offers satellite systems and subsystems in space, earth observation data services powered by state-of-the-art Indian remote sensing satellites; transponder provisioning for meeting telecommunication and broadcasting requirements; launch services for satellites in a variety of orbits through India's Polar Satellite Launch Vehicle (PSLV) and Geo-Synchronous Satellite Launch Vehicle (GSLV).; mission support through the network of ISRO ground stations and other related services. With the versatility of space products and services being marketed, Antrix caters to a broad range of clientele including some of the leading space companies across the globe. Some of the services are elaborated below:

Launch services: India has taken a leap in launch vehicle technology to achieve self-reliance in the satellite launch vehicle programme with the operationalisation of the PSLV and the GSLV.

Satellites and satellite sub-systems: ISRO has established two major space systems – the Indian National Satellite System (INSAT) series (for communication, television broadcasting and meteorological services), which is geo-stationary, and Indian Remote Sensing Satellites (IRS) system (for resources monitoring and management).

Earth observation: The IRS constellation of satellites are Earth Observation Satellites, offering data in various spectral, spatial and temporal resolutions. These satellites are time-tested and have a proven track record. IRS data has been of immense use not only in India but globally.

ISRO's Mangalyaan mission to Mars cost about approximately USD72 million – around one-tenth of NASA's spend on its 2013 Maven explorer that it sent to the same planet.⁸

Transponder provision: Antrix aids DTH operators in expanding their services, news channels in sending live feeds to their channels, as well as in Very Small Aperture Terminal (VSAT) and telephony services.

Mission services: With about 70 missions and 40 launches to its credit, Antrix has experience in mission operations and support services such as mission planning and development; Launch and Early Orbit Phase (LEOP) support, including on orbit operation service; Transfer Orbit Support Services (TOSS); Telemetry; Tracking and Command Support for LEOP in S and C bands and on orbit TTC services in Extended C and Ku band support for GEO missions; In Orbit Test (IOT) Service for Bus Systems and Payload Characteristics; Network Operation and Control; and round-the-clock spacecraft health monitoring.

Other services: Antrix offers to supply, install, integrate, commission and operationalise ground stations for remote sensing, communication and meteorology satellites. Also the supply and installation of the following systems are undertaken by Antrix for national and international customers.

Source: ⁷ Antrix website, accessed 26 February 2016 <http://www.antrix.gov.in/>;

⁸ Indian startups beginning to make their mark in space', *Economic Times*, 30 January 2015

Government policies, regulatory regime and private participation



The government of India has taken several initiatives for the space sector and have also included it in the Make in India campaign.

FDI limit relaxed

FDI up to 74 per cent is allowed in satellite establishment and operation, subject to the sectoral guidelines of the Department of Space/ISRO, under the government route.⁹

Regulations¹⁰

1	Developed a policy framework for Satellite Communication in India (approved by the government in 1997).
2	Created norms, guidelines and procedures for implementation of the Policy Framework for Satellite Communications in India, approved by the government in the year 2000.
3	Constituted the INSAT Co-ordination Committee
4	Framed the Remote Sensing Data Policy in 2011

Private participation¹¹

After catching global attention for the cost-effective innovations that propelled the Mars mission, India's space industry is being boosted by start-ups who have ambitions to revolutionise the sector.

A relatively new start-up has showcased its plans to develop and launch satellites for non-telecom commercial applications such as vehicle and flight tracking, disaster management, predictive analytics and imaging. The firm signed a collaboration with a German company in January 2015 to establish India's first factory for small satellites. It is expected to be operational later this year with a capacity to manufacture 10-12 satellites annually.

Another aerospace start-up, which is the only Indian team competing in the USD30 million Google Lunar XPrize competition, won a USD1 million prize money in the 'Landing Milestone' category.

A global technology services company based in Bengaluru, which develops communications satellites for broadcasters, system integrators and governments, signed a satellite procurement agreement with an UK-based firm in July 2014 to develop two small geostationary satellites.

The start-ups are aiming higher, looking to integrate as well as launch satellites, accomplishing what India's space agency, ISRO, has been doing since its inception in 1969 while also building sustainable businesses

Source: 9 FDI policy, Make in India accessed 02 April 2015 <http://www.makeinindia.com/policy/foreign-direct-investment>;

10 Sector policy, Make in India accessed 02 April 2015 <http://www.makeinindia.com/sector/space>;

11 Indian startups beginning to make their mark in space, Economic Times, accessed 02 April 2015



Language and skill requirements



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Overview



As the world economy continues to create waves, India has been able to maintain a good balance by keeping itself afloat with reference to its economic growth. The country has aptly avoided the troughs that are becoming a challenge for many matured and emerging economies. India is investing significantly in the domestic market, and aiming to bring a global perspective to its development. By doing so, it is trying to engage foreign partners to invest in its growth. By achieving a growth of over 7 per cent GDP in 1H FY2015-16¹, the country has been able to successfully draw the attention of world economies looking for better investment pastures. Today, India is regarded as the world's fastest-growing large economy.²

India's performance as the USD2 trillion economy at current prices³ is keenly observed by the world. During FY14, India's domestic consumption and investment contributed a growth of 57 per cent and 33.1 per cent, respectively, to the Gross Domestic Product (GDP).⁴ This performance played a significant role to keep India's economic sentiments charged up. And now, that the International Monetary Fund (IMF) has forecast the economic growth for India for 2016 at 7.5 per cent⁵, India is firmly on its way to become a global growth engine.

In this scenario, India is opening up a world of opportunities for investments in a significantly conducive and supporting environment. It commands a demographic dividend with 65 per cent of human resource pool being under the age of 35 and about 12 million individuals are expected to join the workforce annually.⁶ Hence, India is expected to change its development course radically, by aiming at holistic development of the cities and towns, allowing opportunities for job creation and skilling human resources to leverage the opportunities. Only then, can India be able to achieve a sustainable growth.

In 2016, India is expected to be within the top-100 countries in the World Bank's Ease of Doing Business rankings.⁷ As of October 2015 latest rankings by the World Bank, out of 189 countries India was ranked at 130, moving up 12 places from 2014.⁸ Keeping the big picture in mind, the government is taking steps to not only attract propositions for businesses to flourish in the country, but also develop and leverage the untapped human resources to support such developments by emphasising 'skill development' across the sectors.

Source: 1 India soars high, KPMG in India's analysis 2016

2 <http://www.ft.com/cms/s/0/1dc01f08-e90c-11e5-bb79-2303682345c8.html#axzz457GFaTO1>

3 India soars high, KPMG in India's analysis 2016

4 India soars high, KPMG in India's analysis 2016

5 India soars high, KPMG in India's analysis 2016; <https://www.kpmg.com/IN/en/IssuesAndInsights/ArticlesPublications/Documents/State-Assessment-Report.pdf>

6 <http://www.cii.in/PublicationDetail.aspx?enc=KZoB+auhgWWBFkUHBczsvXarpynXeu7QomtMCmJbvcc=>

7 http://articles.economicstimes.indiatimes.com/2015-11-23/news/68510291_1_business-ranking-189-countries-finance-jayant-sinha

8 <http://indianexpress.com/article/business/economy/india-ranks-130-in-ease-of-doing-business-jumps-12-places-world-bank-report/>

1.1 Scope for the future

During a 'Make in India' workshop in 2015, the state governments in India decided to implement a 98-point action plan to aid business reforms in all states and improve the ease of doing business.⁹ The Department of Industrial Policy & Promotion (DIPP) report¹⁰ — Assessment of State Implementation of Business Reforms — released in September 2015 provides an assessment of the business reforms implemented by each state. The report studies the performance of states from 1 January to 30 June 2015 and ranks the states accordingly.¹¹ According to the report, Gujarat, Andhra Pradesh, Jharkhand, Chhattisgarh and Madhya Pradesh are the top-five states in the stated order, indicating a high degree of implementation of the 98-point plan of business reforms. However, to increase the scope of direct/indirect job creation and skill development by states, a thorough strategy could be outlined at the centre to push states to improve upon the skill sets of human resources. This move is likely to help the states spur economic development.

1.2 Conclusion

Riding on positive economic growth, India's services sector could harbour ambitions to expand its reach globally. This could be realised by embracing knowledge of international languages and an array of skills, as enumerated in this chapter, which would allow the sector to achieve further prominence and establish its services around the world. Hence, by investing in building language and skill capabilities, the services sector could pave a growth road map that is sustainable in the long run.

Source: 9 KPMG in India's analysis 2016

10 http://dipp.nic.in/English/Investor/Ease_DoingBusiness/StateAssessmentReport_14September2015.pdf, September 2015

11 <http://www.india-briefing.com/news/ease-business-statebystate-analysis-11572.html/>

Sector — Media and Entertainment (M&E)



The media and entertainment (M&E) sector is one of the most dynamic industries in India with modern technologies acting as accelerators. Powered by digital media in the past few years, the changing content consumption patterns, phased progress in digitisation, regulatory and structural changes, the emergence of new consumer centres across tier III and IV cities, and the rise of new sectors within are expected to play a pivotal role in the increased demands for manpower requirements in the industry.

The major segments within the industry are television, print, films, radio, music, live events, gaming, Out-of-Home (OOH) advertising, and Animation and Visual Effects (VFX). In 2015, television accounted for the largest proportion of the total revenues of the M&E sector, and is expected to maintain its dominance over the next five years. Rising literacy, continued urbanisation and growing content consumption, especially among the younger sections of the population, are expected to continue to drive traditional media penetration and growth in India.¹²

2.1 Sector language capability

Content in any form (text, audio and video) lies at the core of the M&E industry. Therefore, language may act as a barrier for users from other geographies and cultural backgrounds. Also, animation, VFX and game development work involving audio content requires language expertise.

Recognising the potential of service exports to international markets, Indian TV channels have started to cater to solutions, such as dubbing and subtitling, for the content being consumed beyond the national borders.

A number of languages could be considered — regional as well as international, depending on the geographies that the content prepared could address/target. For example, top-exporting countries for M&E services are the US, the UAE, Saudi Arabia, Malaysia and South Africa.¹³ So, apart from English language, the knowledge of Arabic and Malaysian languages could help penetrate the export markets significantly.¹⁴

2.2 Sector skills capability

Although there is no dearth of people applying for jobs across various sub-sectors in the M&E industry, they often lack the relevant skills required for jobs. This is primarily due to the absence of standardised training courses and knowledge infrastructure. In terms of overall vocational development of skill sets, the macro environment within the media industry is not as evolved and conducive as mature industries such as IT and pharmaceuticals. The perception about media as a vocation, especially on the creative side, is often not favourable. Some of the challenges this industry is facing are:

- The students trained in media courses often have to compete for jobs with graduates from the general stream
- There is no clear path that students could pursue aiming at a career in the M&E industry. Additionally, the entry-level salaries are low compared to other industries in India¹⁵
- The job security is low and there is a widespread use of freelancers.

Source: ¹² 'The Future: now streaming', KPMG-FICCI Frames report, March 2016

¹³ "NRISPIOS-Data (as on January 15)," MOIA, June 2015

¹⁴ KPMG in India's analysis 2016

¹⁵ The IT-BPM Sector in India, Strategic Review, NASSCOM, February 2015

Hence, the industry opts for on-the-job training, which results in time and budget overruns on the employer's business.¹⁶ A lot of production houses in the areas of television, films and animation have in-house training schools, but that leads to the creation of a captive talent

pool and does not benefit the industry at large. The growth drivers clearly point towards a requirement for substantial manpower, both in terms of quantity and quality across sub-sectors.

Sub sectors	Employment numbers in 2013	Additional workforce required by 2017 over 2013	Professionals in high demand
Films	160,800	87,800	Set craft artists, actors/voiceover artists, support staff (drivers, spot boys) and production personnel
Television	144,600	135,800	Production, ad sales/account management and post-production
Animation	32,000	9,900	Animators, art and design specialists, and asset creation experts
Digital	8,100	16,400	Content writing, content curation, ad sales, IT
Gaming	17,300	8,000	Animation, game development, asset creation, testing, and art and design

Source¹⁷: Skills gap study for the media and entertainment sector, Media & Entertainment Skills Council, February 2014

While a number of private and public institutions have been established in the last two decades, there is a need of standardised courses and additional specialised courses to meet the expanding industry demands¹⁸:

- Institutions could pay attention to teacher recruitment and training, and create regularly updated curriculum in consultation with the sector
- Constant upgrade of skills in line with Indian and global standards is a pressing need, which is often ignored in the training mandate
- Awareness through vocational education could be imparted to school students about the industry during their secondary school education
- Managerial skills are required in many job roles in the M&E industry, and hence could be considered as an important area of education
- It is important to adopt new skill-sets that are required for the changing industry with the incorporation and usage of modern technology.

The animation, visual effects and gaming industry has a substantial demand, primarily triggered by foreign production companies. The need to cultivate this industry has become extremely vital as international studios are aiming to hire Indian professionals to run their operations. However, most of the production houses in the country still rely on foreign talent in the absence of a well-trained domestic resource pool.¹⁹ Therefore, a continuous flow of domestic talent that matches foreign standards is the need of the hour. To this end, the government has invested in various state-level schemes to generate opportunities for skill development and employment.

In addition, the government has approved a National Centre for Animation, Gaming and Visual Effects (NCOE) to improve the capacity of training for the gaming and animation industry in India.²⁰

Sources: 16 Skills gap study for the media & entertainment sector, Media & Entertainment Skills Council, February 2014

17 <http://www.mescindia.org/MESC-Skills-Gap-Study.pdf>

18 KPMG in India's analysis 2016

19 KPMG in India's analysis 2016

20 'Animation and Gaming Centre will be situated close to industry venue,' Animation Xpress, December 2015

Sector — Technology



India continues to maintain a leadership position in the global IT-BPM (Information Technology – Business Process Management) arena. It has a distinct position as the only country that offers numerous IT services.²¹ In the previous fiscal ending 31 March 2016, the sector is expected to grow at a rate of 13 per cent to reach USD146 billion over the previous year. Exports are expected to touch USD98 billion in FY15, further signifying the crucial role of the technology sector in the economy and the employment opportunity it offers.²²

3.1 Sector language capability

Language plays a vital role in the IT sector and India has been able to capitalise on the advantage it offers to global businesses due to the large English-speaking human resource pool. However, in the technology sphere, it is vital that India acquires knowledge of other international languages to widen its business scope. For example, the manufacturing hubs of China and Japan are dependent on Vietnam for two kinds of language adaptability requirements — understanding the user requirements and system documentation, and language applicability for user interface. Even now, documents in Japan are produced in Japanese, making it difficult for Indians to comprehend, although translations could be made. Hence, a major area of focus is to popularise the concept of learning foreign languages and emphasising on this at the elementary education level in India.

India could enlarge the scope of IT services export in the international market by acquiring knowledge of languages, such as Filipino, Chinese, Japanese, Danish, Norwegian and Swedish.

3.2 Sector skills capability

In a bid to cater to the increased domestic and foreign demands, Indian companies have taken various initiatives such as²³:

- Partnering with foreign companies for IT infrastructure management
- Building Big Data centres in India to support IT operations
- Making significant investments in the space of disruptive technologies, such as wearables and the Internet of Things (IoT).

Initiatives taken by the government for skills development²⁴:

- A National Web Portal has been launched by the Ministry of Human Resource Development for the promotion of National Apprenticeship Scheme for graduates, diploma holders and 10+2 vocational certificate holders. The objective is to bridge the gap between students and the Indian industry.
- The construction of a technology incubator in Hyderabad by the Government of Telangana has begun to reposition the city as a technology destination. The aim is to build the world's biggest start-up incubator housing 1,000 start-ups.

Focus areas for India to achieve prominence²⁵:

- To adapt the digital environment, and invest in designing, building and operation of internet-enabled devices
- To focus on innovation of technologies and services revolving around SMAC

Source: 21 NASSCOM Strategic Report 2015

22 <http://www.nasscom.in/robust-growth-indian-itbpm-industry> access date

23 KPMG in India's analysis 2016

24 <http://pib.nic.in/newsite/Printrelease.aspx?relid=1267850>

25 KPMG in India's analysis 2016

- To develop cloud and mobility-based software testing mechanisms
- To develop analytics capabilities and offerings
- To further develop the country's substantial talent pool of skilled IT professionals
- To train a significant number of graduates to be employable through increased number of quality training institutes/courses.

Skills required in the IT-BPM industry

Technology

- Need for diverse and vertical specialists driving greater lateral hiring, especially among Small and Medium Enterprises (SMEs) and Global Inhouse Centres (GICs)
- Cloud and mobile technology, application development specialists
- Business intelligence and data analysts

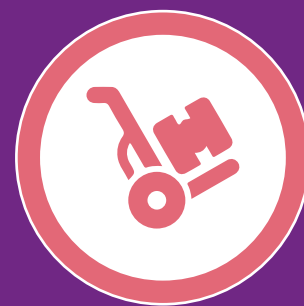
Domain-specific

- Platform engineers
- Bankers
- Mathematicians
- Cybersecurity coders

Soft skills

- Customer interaction
- Communication in English
- Presentation

Sector — Logistics



Indian logistics firms receive a majority of foreign income by providing export services. On the other hand, the country depends on many foreign-based operators for the import of services. Thus, export promotion from India is likely to be a function of reforms that could lead to growth and the maturity of Indian logistics services in the respective segments, allowing service providers to develop an international network and expertise in the form of knowledge gains and skilled workforce.

The transport and logistics sectors could be segmented into various logistics clusters spread across the country, each specialising in distinct service lines — land transportation, warehousing and storage of non-refrigerated products, rail transport, motorised freight road transport, etc.

4.1 Sector language capability²⁶

Scope: Documentation as well as day-to-day operations in many of the leading export destinations is in the English language. Although regional languages have their own benefits when it comes to communication, the ability to communicate in any other foreign languages such as Dzongkha, Nepalese, Arabic and Swahili, would enhance the scope of employability and in the ease of operations.

4.2 Sector skills capability²⁷

The transport and logistics sector is expected to mature as key enablers such as industry-specific solutions, skilled manpower and the ability to establish customer relationships, continue to evolve. Innovative training techniques and methods are essential to upskill the manpower to meet the changing needs of the industry.

Skilled manpower

- Professionals with a strong knowledge of the sector, for both management and operational roles, are needed. For instance, driving skills, road safety practices, the knowledge of regulations related to driving, relevant documentation and licences are required for heavy vehicle drivers, skilled manpower for optimal handling and the maintenance of shipments from different industries are essential for inventory controllers or warehouse supervisors
- Experienced personnel at management positions also bring in the knowledge of customer relationship management and industry know-how to organisations.

Technology

- The sector also requires vertical specialists in technology enablement in logistics services, such as Global Positioning System (GPS), Radio-Frequency Identification (RFID), track and trace, and real-time cargo updates, given the on-going emphasis of technology on logistics.
- Additionally, rapid advancements in the sector require up-to-date information, business intelligence and real-time data analyses for efficient planning and operations.

Source: 26 CMIE Prowess, KPMG in India's analysis

27 KPMG in India's analysis

Sector — Legal



The legal services market encompasses myriad services, such as advisory, representation, documentation and procedures, across diverse areas of law, including corporate, criminal, real estate and labour.²⁸

As of 2012, there were 291,680 law firms in India, out of which 97 per cent firms had an employee strength up to nine. India has 600,000 legal professionals in the world, the second highest after the US. Most professionals are employed in small firms across 500 legal practices. The legal services market is expected to undergo regulatory changes, as the Central government is expected to open the sector to foreign firms in a phased manner.²⁹

5.1 Sector language capability

The sector demands a thorough understanding and knowledge of English and Hindi languages, which is the common mode of communication in the Indian legal system. There is a limited scope for regional languages, as High Courts and the Supreme Court accept English as the language for communication.³⁰ But, primarily, a lawyer is required to have fluency in both, written and verbal English, as several of the job responsibilities include presenting cases and writing legal documents.

Other than language, strong analytical and presentation skills are also needed, as these facilitate strategic planning and presentation of the cases in the courts. Besides these, strong research skills also help lawyers in preparing their cases.

5.2 Sector skills capability

Legal services offer various opportunities across domains, such as advocacy, solicitation, research, analysis, consultancy, academics, arbitration and jury. A legal counsel could take up law practice in civil, criminal, income tax, sales tax, Intellectual Property Rights (IPR), matrimony, excise and customs, etc.

To make a career in the legal profession, a *Legum Baccalaureus* (LLB) degree is mandatory and for further advancement, one could also opt for *Legum Magister* (LLM) post-graduation course.

Recently, technology has acquired a prominent position in the legal services industry, as lawyers are required to have proficiency in operating systems and certain software, which help in document management, litigation, etc. In India, graduate lawyers require extensive training under a senior lawyer to learn the intricacies of the profession.

Source: 28 'A CONSULTATION PAPER ON LEGAL SERVICES UNDER GATS,' Commerce Ministry, accessed on October 2015

29 'LEGAL SERVICES IN INDIA: ISIC 7411,' Euromonitor Report, October 2013

30 <http://supremecourtindia.nic.in/history.htm>

Sector — Accounting and audit



India's revenues from the accounting and auditing sector increased 15 to 17 per cent during the period 2013–14. This growth was on account of increasing Foreign Direct Investment (FDI) and growing business activities in the country. The new regulations have positively impacted the performance of the sector.³¹

Until April 2015, the Institute of Chartered Accountants of India (ICAI) had 234,000 members, including fellows and associates, and 830,000 students enrolled in the Chartered Accountancy course.³²

6.1 Sector language capability

English is one of the most commonly spoken languages internationally. A large section of the Indian population communicates in English. With a significant base of English-speaking population in the country, Indian audit firms could cater to the accounting and audit service demands from the western part of the world.

India could also provide its expertise to countries in Latin America, East Asia and Africa, which lack skills and manpower required for such specialised services. Developing additional language skills — Chinese, Spanish, Arabic, Portuguese and French — could enable professionals in India to reach out to Latin American and European countries. Korean, Malay, Japanese, Vietnamese and Thai linguistic capabilities are likely to empower the Indian workforce to understand local documents to penetrate further into other geographies for service exports.

6.2 Sector skills capability

The accounting and audit firms based in India, which offer services to clients within and outside the country, hire Chartered Accountants accredited by ICAI. Students interested in pursuing chartered accountancy should have passed the twelfth standard, or equivalent, from a recognised board of education in order to register with ICAI. The following skills are expected from a qualified Chartered Accountant.

Technical skills

- In-depth knowledge of financial statements
- Knowledge of applicable accounting standards, including Indian Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standard (IFRS)
- A detailed knowledge of various taxation and mercantile laws applicable in the country
- Data management and synthesis
- Proficiency in various computer software and applications used in modern-day accounting.

Soft skills³³

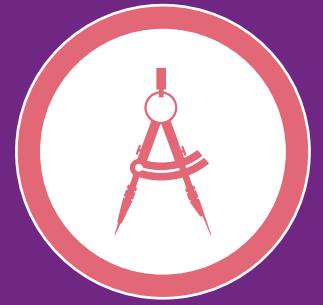
- Adaptability towards understanding relevant changes in accounting standards, made periodically, as well as inculcating those changes during audits
- Ability to communicate with clients during an audit, utilising effective language skills and strong articulation
- Leadership qualities required to head a team of auditors and accountants in establishing the accuracy and materiality of business records
- Professionals employed within the audit and tax sector are expected to maintain independence and objectivity so as not to be influenced by external pressures
- Ability to thoroughly analyse company financial records to ascertain accuracy and provide qualified opinions wherever valid.

Source: 31 *Accounting and Auditing in India*, Euromonitor International

32 'The Institute of Chartered Accountants of India' website, accessed on 10 October 2015

33 'Promoting exports in accountancy sector,' Services Export Promotion Council report 2014, accessed on 9 October 2015; KPMG in India analysis

Sector — Architecture and engineering



The architectural and engineering services market in India is significantly fragmented with more than 50,000 entities serving the sector, and the top-five companies accounting for only 5 per cent of total output. The sector is expected to continue growing at 14 per cent per annum, due to growing urbanisation and increasing spends on public spending on housing, roads, ports, water supply, rail transport, airport development and other infrastructure projects.³⁴

7.1 Sector language capability

India has the advantage of having a large base of workforce fluent in English, which is likely to play an important role in exporting these services to English-speaking destinations in Europe and Australia. This capability might also prove helpful when expanding into countries in Africa and other parts of the world where English is the primary language of business.

In addition, language capabilities could be gained in Spanish and French, which are also widely spoken globally. Further, the knowledge of Korean and Japanese languages would offer significant potential, as these languages have been a challenge for Indian firms to penetrate these markets. The availability of a large English-speaking pool of resources trained in architecture and engineering can facilitate the growth of the sector in the long run.³⁵

7.2 Sector skills capability

India as a service provider caters to the entire spectrum of services under architectural and engineering services, making it a relevant destination for these services.

Skills required

Human capital is an essential element required for driving the architectural and engineering services domain. Professional and academic skills are mandatory for effective execution of service delivery.

Technical and domain skills

Architecture and engineering services are, inherently, of a technical nature and require a degree of specialisation, and formal training. The basic entry-level requirements for employment in these sectors is an academic diploma. However, many companies have a base criteria of an undergraduate degree.

In addition, the knowledge of domain-specific software is desired, such as computer-aided design (CAD) software for architecture and engineering, as well as project management, data processing and presentation software.

Certifications

Apart from formal degrees and diplomas, professional certifications are an important requirement for professionals and companies. Globally recognised certifications, such as Project Management Professional (PMP) for project managers, Leadership in Energy and Environmental Design (LEED) for green building projects and International Organization for Standardization (ISO) certifications for process management, are helpful to enable global mobility and allow benchmarking with peers globally.³⁶

Source: 34 'Architectural and Engineering Services in India,' Euromonitor Report, October 2013, KPMG in India analysis, 2015

35 KPMG in India's analysis 2016

36 KPMG in India's analysis 2016

Sector — Management Consultancy



According to the Economic Survey 2014–15, consulting services have evolved as one of the fastest growing business services in India.³⁷ The rapid expansion in Indian business and management consulting industry is fostering the growth of consultancy firms. Thus, employment opportunities in the sector are also increasing. The total number of firms operating in the business and management consultancy industry in India increased from 54,568 in 2009 to 78,524 in 2014. The industry witnessed an increase in employee base from 152,620 in 2009 to 213,260 in 2014, at a Compound Annual Growth Rate (CAGR) of 6.9 per cent.³⁸

8.1 Sector language capability

Proficiency in the English language is a must for any management consultant. There is a need to develop linguistic capabilities in European languages such as Spanish, German, French and Italian. It is also important to develop skills in Mandarin, Arabic, Portuguese, Korean, Malay, Japanese, Vietnamese and Thai, for determining a clear understanding of local documents, processes and procedures, and to be able to communicate better with clients in the developed as well as emerging geographies.

8.2 Sector skills capability

The availability of a large, educated and skilled labour pool, which would cater to the human capital seems to be the need of the sector.

Mandatory skills³⁹

Human capital is the single-largest asset for any management consultancy firm. These firms are among the leading employers of top MBA and college graduates. The following technical and professional skills are essential for the management consultancy industry.

Technical skills

- Data warehousing
- Database management and working proficiency
- Brand management
- Value management
- Supply chain and logistics management
- Client server development

Domain-specific

- IT professionals
- Bankers
- E-commerce experts
- Healthcare experts

Soft skills

- Communication
- Analytical
- Presentation
- Commercial awareness

Source: 37 'Economic Survey 2015-16,' India Budget website, 26 February 2016

38 'Euromonitor database,' accessed 7 October 2015

39 'Skill sets graduates must have to attract employers,' The Times of India, accessed on 24 August 2015; 'Careers in business website,' accessed on 28 September 2015

Sector — Maintenance, Repair and Overhaul (MRO)



With a broad services portfolio, Aerospace and Defence (A&D) is among the high priority sectors for the government today. A&D services in India mainly comprise of maintenance, repair and overhauling (MRO), engineering services, and research and development (R&D). India is also positioned to become an MRO hub in the future with its expanding aircraft fleet.⁴⁰

MRO pertaining to the shipping industry has significant potential, as approximately 42 per cent of the fleet is over 20 years old, as per the economic survey of 2015-16.⁴¹

9.1 Sector language capability

English is the primary language when working with developed regions on aviation and ship repair services. Mandarin and a few other Asian language capabilities, such as Malay, Russian, Filipino and Tamil, could help attract business from the East Asian countries.

9.2 Sector skills capability

India needs to bridge the gap in skills required to become competent in the global MRO industry.⁴² This objective could be achieved by adopting a holistic approach based on adopting international leading practices and requirements for this industry. The setting up of training schools and institutes for acquiring specialised skills could be done in collaboration with the industry, government and academic institutions. In mid-2014, a leading government enterprise in the aerospace sector collaborated with the Bangalore Chambers of Industry and

Commerce (BCIC) and the Society of Indian Aerospace Technologies and Industries (SIATI) to form Aerospace and Aviation Sector Skill Council (AASSC), for developing skills in the sector. This council regulates skill development activities, such as national occupational standards, qualifications, training curriculum and assessment criteria.

Talented people of Indian origin who have gone abroad due to perception of better opportunities may be keen to come back to India if their key expectations are met. Hence, they could be proactively reached out to. Domain-specific engineers, professionals with soft skills and technology specialists are expected to give India the much-needed edge over its competitors.

Technology

- Engineering skills that form the backbone of the industry
- IT process, development and systems skills

Domain

- Sophisticated design and research skills
- Specific technology skill-sets in MRO services
- Precision manufacturing training with international accredits

Other skills

- Management skills and soft skills could also be developed while competing with the developed nations

Source: 40 http://www.business-standard.com/article/pti-stories/budget-proposals-to-help-india-become-mro-hub-in-aviation-raj-116030200854_1.html

41 <http://indiatoday.intoday.in/story/india-in-urgent-need-to-increase-shipping-fleet-survey/1/606009.html>

42 <http://www.thehindu.com/business/centre-calls-for-bridging-skill-gap-in-civil-aviation-sector/article8152124.ece>

Sector — Education



The quality of school education measured by key learning outcomes remains poor as per the latest 'ASER 2014: Annual Status of Education Report', released in January 2015.⁴³ There is an acute shortage of teachers in the K12 segment, with an estimated vacancy of about five lakh positions. In higher education, the Gross Enrollment Ratio (GER) is at 18 per cent, and way below the targeted 30 per cent by 2020. The quality of higher education could also be improved significantly — evidenced by very few globally ranked institutions in India. With an expected population of 1.4 billion in 2022, India could have approximately 63 per cent individuals in the working age group (15 to 59 years). Hence, there is a continued emphasis on skill development that is aligned with the 'Make in India' initiative.⁴⁴

10.1 Sector language capability

School education

- About 90 per cent of the schools are affiliated to state boards and predominately use the local language of the state for delivering education
- Private schools use English as the language of instruction at both primary and secondary levels. This provides an opportunity for setting up centres of excellence for export of services.

Higher education

- English is the predominant language of instruction, which provides a significant advantage to India for possible creation of centres of excellence.

Vocational education

- Local language would be the predominant mode of instruction. Vocational education in languages prevalent in the South Asian Association for Regional Cooperation (SAARC) region, such as Nepalese, Dzongkha and Sinhalese, could also be provided given the demand for training in the SAARC countries and the cross movement of labour across most of the SAARC countries.

10.2 Sector skills capability

India, due to its favourable demographic dividend, has a large pool of graduates who could be trained to become teachers. The focus could be on the following:

- Faculty could be re-skilled in newer pedagogical methods that leverage technology. The quality of teaching could be further improved and teacher training institutes could be nurtured for achieving this objective
- Academic research skills could be enhanced by giving incentives to faculty members to conduct research work
- It is important to promote soft skills, such as communication, that the faculty could gain by consulting projects in the industry.
- Additional skills are expected from faculty apart from technical skills (subject knowledge and scope of gaining further knowledge to impart education). These skills are required for teaching and research, and would include fund raising (through research, etc.) and institution building.

Source: 43 <http://img.asercentre.org/docs/Publications/ASER%20Reports/ASER%202014/National%20PPTs/aser2014indiaenglish.pdf>, <http://www.jagranjosh.com/current-affairs/ngo-pratham-released-10th-annual-status-of-education-report-aser-2014-1421234638-1>

44 Education Sector in India: A Snap Shot' KPMG Presentation at MIT Enterprise Forum

Sector — Travel and tourism



The tourism sector is one of India's largest service sectors, which has proved to be a key contributor to India's economic development and employment generation. The sector comprises travel, tourist attractions, travel agents and tour operators, and hence employs a large workforce across the length and breadth of the country. It is one of the top generators of foreign exchange.

India's tourism sector's (including hospitality) contribution to the GDP is expected to grow from USD136.3 billion in 2015 to USD275.2 billion in 2025⁴⁵, placing it among the high-growth industries of India. The sector is expected to continue on its growth trajectory as the government supports the sector by upgrading physical infrastructure, creating integrated tourist circuits and building new airports, among others. These steps are expected to improve connectivity and promote various products to increase the scope of inbound tourism, and thereby, increasing the scope of employment. In fact, in 2014, tourism directly and indirectly supported 23 million jobs and 13.7 million jobs, respectively. By 2025, the sector is expected to create 45.6 million jobs.⁴⁶

11.1 Sector language capability

Apart from English, there is a need to develop linguistic capabilities in Mandarin and European languages (Spanish, French, Italian, etc.) within government circles and the private sector. Such capabilities could enable better service quality to tourists. Further, travel-related information could be provided in native languages, both in written and audio forms, to significantly enhance the travel experience of foreign visitors in India.

11.2 Sector skills capability^{47, 48}

The tourism sector in India comprises professions such as tour operators, travel agents, guides and tourist transport operators. The lack of adequate training and skill development infrastructure is expected to create a shortfall in the availability of trained manpower in the future with a steady growth of the sector.

A structured programme for skill development is necessary for sustained growth of the sector. Some of the skills required to help ensure expansion of the sector include:

- Verbal communication skills, fluency in English and at least one foreign language to lower linguistic barriers and help companies/individuals while trading with or serving foreign tourists
- An understanding of the product offering and some degree of cultural awareness are necessary to serve tourists
- A thorough knowledge of history and heritage of historical sites is essential for tourist guides
- Knowledge about adventure tourism, expertise concerned with the sport to help determine safety of tourists, and operators are also considered invaluable especially in the adventure tourism segment
- The knowledge of geographical locations and integrated tourist circuits across the country could determine smooth services for tourists.

Source: 45 Indian Tourism and Hospitality Industry Analysis, IBEF, March 2016; <http://www.ibef.org/industry/indian-tourism-and-hospitality-industry-analysis-presentation>

46 Travel & Tourism Economic Impact 2015 India, World Travel and Tourism Council, 2015

47 KPMG in India's analysis

48 Imagine India — The land of untold stories and unseen destinations – Tourism Vision 2030, KPMG in India and Experience India Society

Sector — Healthcare



The past decade has been an eventful one for the Indian healthcare sector. Estimated at USD163 billion as of 2016, the sector has emerged as the one of the largest ones in India, and is poised to grow at a CAGR of 17 per cent to reach approximately USD280 billion by 2020.⁴⁹ The Indian healthcare sector today is the fifth-largest employer among sectors, is home to one of the largest telemedicine networks in the world, and has received over a billion dollars of investment by way of private venture and equity capital.⁵⁰

The 'Health for All' initiative is a positive step, which could ensure that quality healthcare reaches every level of the demographic pyramid. However, the existing infrastructure is unable to address the healthcare requirements of the country. The sector is faced with the task of bridging the gap between demand and supply of doctors, nurses and other medical staff. The accessibility and affordability of healthcare services to all sections of the society still remains a challenge.

12.1 Sector language capability

Based on nations that feature on the list of top foreign tourist arrivals (FTAs) for India for medical travel, there is a need for interpreters in Dhivehi (spoken in Maldives), Russian, Pashto, Dari, Persian, Arabic and African languages, who are required in all accredited hospitals treating foreign patients. Further, more focus is desired on foreign languages of SAARC region, which is a major contributor to medical tourism in India.

12.2 Sector skills capability

Existing capabilities

- India has 390 registered medical education colleges, 300 dental colleges, 500 Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy (AYUSH) colleges, 2,700 nursing colleges and 500 other colleges focussed on allied services that support the current healthcare system⁵¹
- Further, healthcare has been recognised as one of the key sectors within National Skill Development Corporation (NSDC)⁵²
- Healthcare Sector Skill Council (HSCC) is an NGO created with an aim to build a robust ecosystem for value-based vocational education and skill development healthcare space. Additionally, HSCC aims to serve as a single source of information for the healthcare sector with specific reference to skill and human resource development in India⁵³ HSCC is also responsible for the implementation of Standards, Training, Accreditation and Reward (STAR) scheme launched by the Indian Government.⁵⁴

Source: 49 Healthcare: The neglected GDP driver - Need for a paradigm shift', KPMG in India, August 2015

50 Medical Value Travel, KPMG in India, September 2014

51 Planning Commission Report and National Health Profile 2015

52 NSDC Reports by Industry, NSDC

53 Healthcare Sector Skill Council, NSCSIndia, accessed 4 March 2016

54 Sector Skill Councils, NSCS India, accessed 4 March 2016

Going forward

- Developing soft skills that are patient-centric among the healthcare delivery
- Promoting foreign languages in healthcare education curriculum to help patients coming from different nations
- Promoting adequate skills that help in developing innovative healthcare delivery models
- Promotion and development of AYUSH and yoga skills
- Developing adequate international marketing skills that promote India as a destination for healthcare tourism as a part of the 'Incredible India' campaign.



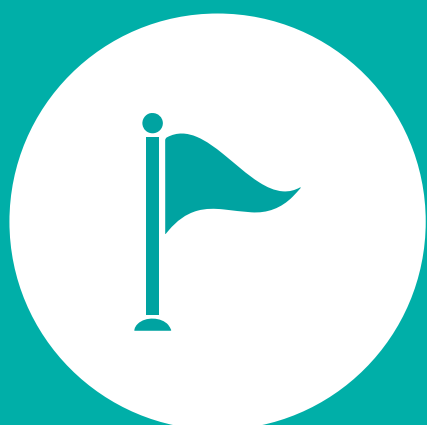
Leading programmes of the Government of India



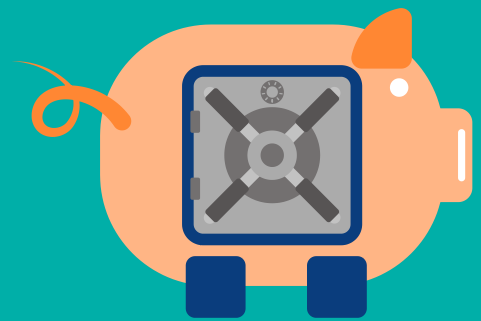
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Flagship programmes of
Government of India

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Flagship programmes of Government of India



The government of India has introduced several structural reforms and leading initiatives in the recent past. The reforms and initiatives are multi-pronged, cutting across sectors, with the prime objective of amplifying the collective growth impact. These initiatives, which hold the potential to have a transformational impact on the Indian economy, have started gaining momentum. The initiatives have been categorised, under the following focus areas:¹

I Make in India

This programme was launched in September 2014² with an aim to boost industrial growth and make the country a global manufacturing hub. The programme intends to enhance manufacturing through initiatives designed to facilitate investment, foster innovation, protect intellectual property and build leading manufacturing infrastructure.

The government has set up an Invest India agency to promote and facilitate investments and also eased FDI norms in 15 key sectors in October 2015.³

Urban development – Transforming Indian cities

Smart Cities Mission

This mission, launched in June 2015, is expected to improve the cities and enable local area development, thereby driving economic growth and enhancing the

quality of life. This urban transformation is expected to be driven by adopting technology-based interventions. A total of 100 cities have been identified under the mission. In all, 20 cities have been selected in the first phase of the government's plan that are expected to receive a funding of up to USD7.5 billion from the government by 2019 in a phased manner.⁴

Atal Mission for Rejuvenation and Urban Transformation (AMRUT)

This mission was launched in June 2015 with an objective to provide basic services such as water supply, sewerage and urban transport to every household to improve the quality of life. Among the estimated 4,040 urban zones in India, about 500⁵ are likely to be targeted through AMRUT. City-level action plans have been approved for 474 cities in 18 states and union territories with a total project expenditure of about USD2.9 billion under AMRUT for FY2015-16.⁶

I Digital India initiative

Launched in July 2015, the Digital India project aims to transform the country into a digitally empowered society and knowledge economy. This ambitious project lays emphasis on the national e-governance plan. About USD17.5 billion worth of investments are planned for the project by 2019. Initiatives such as Digital Locker system, Online Registration System (ORS), Digitise India Platform (DIP), Bharat Net, Next Generation Network (NGN), etc., have already been introduced under this programme.

Source: 1 India Soars High, KPMG in India, February 2016

2 Make in India, <http://www.makeinindia.com/home>, accessed 10 February 2016

3 Make in India, <http://www.makeinindia.com/home>, accessed 10 February 2016

4 Smart Cities Mission Statement & Guidelines, Ministry of Urban Development, Government of India, June 2015, <http://smartcities.gov.in/writereaddata/SmartCityGuidelines.pdf>

5 AMRUT Mission Statement and Guidelines, Ministry of Urban Development, Government of India, June 2015, <http://amrut.gov.in/writereaddata/AMRUT%20Guidelines%20.pdf>

6 AMRUT Mission Statement and Guidelines, Ministry of Urban Development, Government of India, June 2015, <http://amrut.gov.in/writereaddata/AMRUT%20Guidelines%20.pdf>

Universal energy access and reviving the power sector

Power for All programme

The programme aims at providing quality, reliable and affordable power supply 24x7 to all Indian citizens by 2022. The government of India has planned an investment of USD45.2 billion in power transmission and distribution business to achieve its targets under the Power for All initiative. The Deendayal Upadhyaya Gram Jyoti Yojana and Integrated Power Development Scheme, worth USD6.5 billion, have already been initiated by the government of India to enhance the transmission and distribution network.⁷

Ujwal DISCOM Assurance Yojana (UDAY)

This scheme, launched in November 2015, has been approved to provide a financial turnaround for the state-owned power distribution companies (DISCOMs), by helping them to overcome the outstanding debt of USD64.8 billion (as on March 2015). The government of India has made provisions in the scheme to make states more accountable for operations of DISCOMs by restricting banks from funding their operational losses.

Financial and communications inclusivity

The JAM Number Trinity, or the Jan Dhan Yojana-Aadhar-Mobile Number Trinity, was introduced in February 2015. Its main objective is to facilitate direct subsidy transfers in order to enable the government to provide targeted subsidies, reducing distortion and subsidy leakages while expanding financial inclusion. It has helped to create more than 194 million bank accounts with deposits worth more than USD4 billion in 10 months since its launch.⁸

Revitalising public sector banks

Indradhanush or the Rainbow initiative, launched in August 2015, is a seven-point reform plan to strengthen governance in public sector banks (PSBs) to address their concerns about rising non-performing assets (NPAs).

Banks are expected to reduce their NPAs by March 2017. A collective capital of USD11 billion is expected to be allocated to banks by government of India by 2019 in a phased manner. Under the scheme, a new framework of Key Performance Indicators (KPIs) to measure the performance of PSBs has been unveiled.

Skill and entrepreneurship development

Skill India

Skill India aims to provide the institutional capacity to train a minimum of 300 million people by 2022. The total outlay of this project is USD234 million, out of which USD174 million will be spent on skill training of 14 lakh youth; A total of USD34 million⁹ has been earmarked to provide a special emphasis for recognition of learning.

A Ministry for Skill Development and Entrepreneurship and Pradhan Mantri Kaushal Vikas Yojana (PMKVY) and Skill Loan Scheme have been introduced under this programme.

Hygiene infrastructure

Swachh Bharat Abhiyan (Clean India Mission)

This mission, launched in October 2014, aims at encouraging people to have a toilet in their homes, eradicating manual scavenging and adopting a modern and scientific municipal solid waste management system. It intends to bring a behavioural change for healthy sanitation practices by generating awareness about sanitation and its linkage with public health. The mission also targets to augment the capacity of Urban Local Bodies (ULBs) and allow an open environment for private sector participation in capital expenditure (capex) and operational expenditure (opex).

The share of the central government would be USD2.3 billion, while USD760 million is expected to be contributed by the states and ULBs. An app called Swachh App was launched on 22 December 2015 for monitoring the progress of the Swachh Bharat Abhiyan in rural areas.¹⁰

Source: ⁷ Government eyes Rs 3-trn investment, reforms to light up power sector, *The Financial express*, 28 December 2015.

⁸ 'Wiping every tear from every eye': the JAM Number Trinity Solution, *Economic Survey 2014-15*, <http://indiabudget.nic.in/es2014-15/echapvol1-03.pdf>.

⁹ Pradhan Mantri Kaushal Vikas Yojana, Press Information Bureau, April 2015, <http://pib.nic.in/newsite/PrintRelease.aspx?relid=117547>

¹⁰ Guidelines for Swachh Bharat Mission (SBM) - https://swachhbharaturban.gov.in/writereaddata/SBM_Guideline.pdf, 6 December 2015

National Mission for Clean Ganga (NMCG)

This mission was launched to ensure effective abatement of pollution and rejuvenation of the Ganges. In all, USD317 million has been allocated for the Integrated Ganga Conservation Mission 'Namami Gange'. In addition, a corpus of USD15 million was announced for the development of ghats and beautification of the river fronts.

Ease of Doing Business (EoDB)

The initiative has been launched with an aim to create a conducive business environment by streamlining regulatory structures and to create an investor-friendly business climate by cutting through the red tape. India has shown an improvement on the World Bank's latest Ease of Doing Business Report (from 134 in 2015 to 130 in 2016), and the government has set an ambitious target of securing among the top 50 rank by 2017.

| Infrastructure investments

Railways

The railway ministry has earmarked an investment of USD133.5 billion toward development of the railways sector by 2019.¹¹

Roads

The government has earmarked an investment of USD32.4 billion in the twelfth Five Year Plan (FYP) for the development of roads during 2012-17.¹²

Sagarmala Project (coastline development)

This project intends to transform existing ports and creating new ones with leading technology and infrastructure. The government of India is expected to invest USD16 billion towards this.¹³

Inland waterways: Developing an alternate mode of transportation

This initiative involves developing the proposed 101 inland waterways with an estimated investment of USD5.5 billion over the next two years to create an alternative mode for transportation of goods.¹⁴

Housing for All by 2022

Launched in June 2015, Housing for All (HFA) by 2022 aims at providing a home for all Indian families by 2022, by promoting affordable housing for the weaker sections through credit-linked subsidy and providing affordable housing through public and private stakeholder collaborations.

Central assistance of approximately USD2,200 per house for the Economically Weaker Sections (EWS) category would be provided for constructing the houses.

Source: 11 'Highlights of the Railway Budget 2015-16', Indian Railways, http://www.indianrailways.gov.in/railwayboard/uploads/directorate/finance_budget/Budget_2015-16/English_Speech_Highlights_2015-16.pdf, 25 February 2015

12 'Outcome Budget 2015-16', Ministry of Road Transport and Highways (MORTH), GoI

13 'Sagarmala – Building Gateways of Growth', Ministry of Shipping, 5 October 2015

14 'Inland waterways policy: Dredging through the silt', *The Indian Express*, 19 August 2015



Start-up India



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Overview



India has emerged as the fastest growing start-up ecosystem in the world and the third largest globally in 2015.¹ With an investment of over USD5 billion in the start-up domain and the number of investors having grown from 220 in 2014 to 490 in 2015², the sector has witnessed significant traction and is poised to emerge as the next major growth driver for one of the fastest growing economies in the world.

| Objective

To further drive the emergence of India as a start-up hub, the government of India launched the 'Start-up India' programme in January 2016.³ The programme aims to further support the thriving start-up ecosystem in the nation and encourage entrepreneurship as a career choice.

The Start-up India programme has laid out several steps towards promoting entrepreneurship and self-reliance amongst the nation's populace as a means of driving innovative solutions and creating employment. The promotion of entrepreneurial activity among weaker sections of the society, as well as women, remains a priority of the government.

| Road map

The initiative is being planned as a multi-pronged, collaborative effort among various public sector entities and is expected to be led by the Department of Industrial Planning and Production (DIPP).⁴ The Ministry of Human Resource Development and the Department of Science and Technology intend to collaborate to set up over 75

start-up support hubs in elite educational institutions throughout the country.⁵ In addition, the Reserve Bank of India (RBI) is expected to take incremental steps towards promoting ease of doing business in the country and contribute to an ecosystem that is conducive for the growth of start-up businesses.⁶

| Key steps⁷

Several specific measures were announced at the launch of the 'Start-up India' initiative, which were aimed at not only promoting entrepreneurship in India, but also at establishing the country as a global hub for start-up activity. Some of these key measures include the following:

- USD1.5 billion corpus of funds to be made available to qualified start-ups
- 80 per cent reduction in patent registration fee
- A proposed 90-day exit window and a simplified bankruptcy code
- Income tax exemption to start-up ventures for the first three years
- Capital gains tax exemption for three years since inception⁸
- Self-certification as a means of ensuring compliance
- A proposed National Credit Guarantee Trust Company with a budgetary allocation of INR500 crore over four years
- Single window clearance with the help of a dedicated mobile application
- Innovation hub under the Atal Innovation Mission.

Source: 1 "NASSCOM Startup Ecosystem Report 2015: India the Next Tech Hotbed", iamwire, 14 October 2015

2 "NASSCOM Startup Ecosystem Report 2015: India the Next Tech Hotbed", iamwire, 14 October 2015

3 "START-UP India Launch by Prime Minister Narendra Modi on 16th January, 2016", Press Information Bureau, 5 January 2016

4 "India soars high", KPMG in India, February 2016

5 "Start up India: This is the beginning of big bang start up boom in India, says Softbank CEO", The Hindu Business Line, 16 January 2016

6 "RBI to create enabling framework for growth of start-ups", The Hindu Business Line, 2 February 2016

7 "Startup India: 19 key points of PM Modi's action plan", India Today, 17 January 2016

8 "No income tax on start-up profits for first three years: PM Modi", Business Standard, 16 January 2016

To ensure a targeted approach towards developing a sustainable start-up ecosystem, the government has laid down specific eligibility criteria for firms to leverage the host of opportunities available. These include norms such as the firm being less than five years old since inception, a turnover below INR25 crore and a commercially viable and innovative product among others.⁹

| The way ahead

These measures could directly relieve some of the key obstacles in the way of entrepreneurship and help establish it as a key driver of growth for the Indian economy. With many of the factors already in place for entrepreneurship to flourish in India, it is necessary that the government's efforts are focussed towards aspects that could help ease the hurdles in the way of entrepreneurship.

Source: ⁹ "Are you eligible for schemes under ambitious Startup Action Plan?", Your Story, 18 January 2016



Conclusion



India has been successful in making its mark globally in the export of high quality services. While some sectors have gained expertise and maturity in exporting services out of India, others are developing rapidly in terms of skill and infrastructure to enhance exports.

The country has also emerged as a forerunner in the export of IT and software services, establishing itself as one of the leading business process outsourcing service providers in the world. It is also increasingly offering globally suited professional services, followed by services with respect to tourism and travel, and transport and logistics sectors.

Additionally, there is significant export potential in sectors such as healthcare, banking and financial services, as well as infrastructure related services, which are now focussed on exports. Lower cost of service delivery and easy availability of an educated and qualified workforce are inherent advantages for the country, at this point. Given these, India has the potential to be a major outsourcing destination for several services in the coming years.

Exports in services are primarily driven by the private sector, supported by a conducive ecosystem created by the government to promote them. The government is also taking several measures to enhance services exports from the country. The Ministry of Commerce and Industry, Government of India had incorporated the Services Export Promotion Council (SEPC) in 2006 to provide direction to the services sector. The government's policy driven push and increasing focus on 'Make in India', 'Digital India' and other such initiatives is reflective of its intent to boost the services sector to not only develop the manufacturing prowess of the nation, but also serve a larger section of the global population by export of services. The government is also focussing on improving ease of doing business in India to further provide an impetus to the economy through export of services.

The importance of technology and infrastructure for trade and export promotion cannot be emphasised upon more. The government further needs to focus on upgrading technology in the respective sectors, offer financial funding and support for sector development and provide guidance on new markets to enter. It is important for the government to also support growth in the existing and potential export markets through conducive policies, incentives and tax and duty structures. The increased levels of FDI and constant supply of cost-effective and technically skilled workforce can help ensure supply of resources for the growth of the services sector

While India has created a niche for itself for worldwide exports of certain sectors, including software and professional services, the focus now is expected to be on enhancing exports in sectors which still have a lot to explore for exports, such as healthcare, education, banking and finance sector services. Further, the emphasis is also likely to be on diversification of export destinations to offer services to emerging markets, in addition to the traditional developed markets of the U.S. and Europe. Policy initiatives, including trade reforms, and liberalisation of industrial and service sectors, may provide the required push to the sectors as well.

A conducive regulatory environment and infrastructure could enhance India's global competitiveness in services, with increased productivity, quality employment, and increased trade and investment for inclusive growth. With the government's increasing focus on service exports, coupled with a reviving economy and a policy-based push to the sector, India is expected to witness a significant jump in the same, translating into growth of the economy.



Glossary



A&D	Aerospace and Defence
AAI	Airports Authority of India
AERA	Airports Economic Regulatory Authority
AGAFA	Annual Graphics and Animation Film Awards
APAC	Asia Pacific
AVGC	Animation, Visual Effects, Gaming and Comics
AYUSH	Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy
CADM	Custom Application Development and Management
CAGR	Compounded Annual Growth Rate
CFS	Container Freight Station
CIS	Customer Interaction Services
CIS	The Commonwealth of Independent States
CMIE	Centre for Monitoring Indian Economy
CONCOR	Container Corporation of India
COPD	Chronic Obstructive Pulmonary Diseases
DGCA	Directorate General of Civil Aviation
DTH	Direct To Home
EASA	European Aviation Safety Agency
ER&D	Engineering Research and Development
EXIM	Export-Import
FAA	Federal Aviation Administration
FDI	Foreign Direct Investment
FEE	Foreign Exchange Earnings
FM	Frequency Modulation
FTA	Foreign Tourist Arrivals
GATS	General Agreement on Trade in Services
GCAA	General Civil Aviation Authority
GDP	Gross Domestic Product
GHAIL	GMR Hyderabad International Airport

GIC	Global In-house Centers
GPS	Global Positioning System
GST	Goods and Sales Tax
HAL	Hindustan Aeronautics Limited
IBEF	India Brand Equity Foundation
ICT	Information and Communications Technology
ICU	Intensive Care Unit
INR	India Rupee
IoT	Internet of Things
IP	Intellectual Property
ISRO	Indian Space Research Organisation
IT	Information Technology
IT-BPM	Information Technology – Business Process Management
ITeS	Information Technology Services
JCI	Joint Commission International
JV	Joint Venture
KPI	Key Performance Indicators
LCL	Less-Than-Container Load
M&A	Merger And Acquisitions
M&E	Media and Entertainment
MAE	MAS Aerospace Engineering
MCI	Medical Council of India
MIB	Ministry of Information and Broadcasting
MNC	Multi-national Company
MoCA	Ministry of Civil Aviation
MoU	Memorandum of Understanding
MRO	Maintenance, Repair and Overhauling
MSME	Micro, Small and Medium Enterprises
MSMED	Micro, Small and Medium Enterprises Development
NABH	National Accreditation Board for Hospitals and Healthcare Providers

NASSCOM	National Association of Software and Services Companies
NCR	National Capital Region
NSSO	National Sample Survey Office
NVOCC	Non Vessel Owning Common Carrier
OOH	Out of Home
PE	Private Equity
PPP	Public Private Partnership
R&D	Research and Development
RFID	Radio-frequency identification
RoW	Rest of the World
SAARC	South Asian Association for Regional Cooperation
SEZ	Special Economic Zone
SIATI	Society of Indian Aerospace Technologies and Industries

SMAC	Social, Mobile, Analytics and Cloud
SME	Small and Medium-Sized Enterprises
STB	Set Top Box
STP	Software Technology Park
TMS	Transport Management Systems
U.S.	United States
UNWTO	United Nations World Tourism Organization
USD	United States Dollar
VC	Venture Capital
VFX	Visual Effects
WMS	Warehouse Management Systems
WTTC	World Travel and Tourism Council
Yo-Y	Year On Year

About CII

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering industry, Government, and civil society, through advisory and consultative processes.

CII is a non-government, not-for-profit, industry-led and industry-managed organization, playing a proactive role in India's development process. Founded in 1895, India's premier business association has over 8000 members, from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 200,000 enterprises from around 240 national and regional sectoral industry bodies.

CII charts change by working closely with Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness and business opportunities for industry through a range of specialized services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues.

Extending its agenda beyond business, CII assists industry to identify and execute corporate citizenship programmes. Partnerships with civil society organizations carry forward corporate initiatives for integrated and inclusive development across diverse domains including affirmative action, healthcare, education, livelihood, diversity management, skill development, empowerment of women, and water, to name a few.

The CII theme for 2016-17, **Building National Competitiveness**, emphasizes Industry's role in partnering Government to accelerate competitiveness across sectors, with sustained global competitiveness as the goal. The focus is on six key enablers: Human Development; Corporate Integrity and Good Citizenship; Ease of Doing Business; Innovation and Technical Capability; Sustainability; and Integration with the World.

With 66 offices, including 9 Centres of Excellence, in India, and 9 overseas offices in Australia, Bahrain, China, Egypt, France, Germany, Singapore, UK, and USA, as well as institutional partnerships with 320 counterpart organizations in 106 countries, CII serves as a reference point for Indian industry and the international business community.

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