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Developing Service Sector Linkages in North East

North East Connectivity Summit

September 2017

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Foreword Deloitte

The services sector, which stands at about $1.48 trillion and contributes around 66% to India's GDP, is the fastest growing sector, currently growing at 9.2%. It has the potential for further growth, riding on various government initiatives like Make in India, Skill India, Start-up India, and Digital India.

Many industries in the services sector have grown at double digit in the last few years backed by digital technologies and institutional mechanisms facilitated by the government. With the availability of a rich demographic dividend, human resources with diverse skill sets, increasing ease of doing business and significant progression in government outlook, India looks set to become an ideal business destination for leading players across industries.

To continue India's success in the services industry it is important to continually identify new avenues of growth. The seven sister states of Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, and Tripura along with the state of Sikkim form the North East Region and if utilised effectively may act as an important growth lever for the services sector. Strategically located in the heart of South Asia, these region shares international borders with Nepal, Bhutan, Bangladesh, and Myanmar. The services sector alone contributes to almost 51% of the GSDP of the North Eastern Region driven by trade, tourism, real estate and insurance.

The region is endowed with natural resources, breath taking scenic beauties and a wide range of flora and fauna, which appeals to the adventure seeking tourists across the world. The high literacy rate, availability of English speaking and writing workforce gives the region an abundance of human resources who can be effectively engaged in developing the services sector. Given the huge potential of the area, it is worthwhile to look at the opportunities for developing service sectors in the region which can positively impact the livelihoods of the people in the region.

Deloitte India is honoured to be associated with FICCI for the 4th edition of the North East Connectivity Summit. We have prepared a publication highlighting and introducing the opportunities in select service sectors in the North East. This publication provides the industry profile of key services sectors, such as tourism, healthcare and skill development in this region. We have emphasized on the key drivers of growth in these sectors and how the locational advantage of the North East region, giving its proximity to countries like Bangladesh, Bhutan, Myanmar and Nepal can be utilised effectively for faster development of these sectors.

We hope the publication will enable various stakeholders such as the services industry, government bodies, the public as well as the private sector to identify the future prospects for each of the service sectors covered in this publication and help in their strategic thinking and planning.



Dr. Anand Ramanathan
Partner
Deloitte Touche Tohmatsu India LLP

Foreword FICCI

North East India, home to 45 million people and surrounded by 5300 kms of international borders could easily be India's Portal to the east. Given its geographic position, the richness of ecological assets and the increasing focus on engaging with the east, the region could very well become the new growth engine for India.

Last year we were privileged to hold the 3rd North East Connectivity Summit in Tripura. We received overwhelming support from the State Government led by Chief Minister Mr. Manik Sarkar and the participants from across India and Bangladesh, Bhutan, Myanmar, Nepal showed a keen interest in taking forward the agenda of connectivity.

We thank and compliment the Government of Nagaland for having readily agreed to host the 4th North East Connectivity Summit. In particular, I would like to thank Hon'ble Chief Minister Mr. T R Zeliang and former Chief Minister Dr. Shurhozelie Liezietsu for their support and guidance.

Over the last few years, the North East Advisory Council of FICCI has deliberated at length the idea of connecting the region through culture, infrastructure, trade and biodiversity. We have consulted a cross-section of stakeholders in the region and in our Neighbouring Countries. While our belief in the potential of the region has grown stronger, it has also become apparent that the most critical part is to restore the linkages.

We have witnessed some positive developments in recent times. Apart from major Pan Asian Projects like Asian Highway I and II, the Trans-Asian Railway and the BBIN Corridor, a number of regional initiatives like the Trans Arunachal Highway, rail connectivity to state capitals and expansion of airports have also been taken up.

However, the implementation process has often been slow and some important projects like riverways development, wayside Amenities etc are yet to see much progress. It is therefore of pertinent importance that a plan to strengthen the implementation capacity be put in place.

North Eastern Region Implementation Agency:
This can best be achieved by setting up a North East Regional Project Implementing Agency to handle funding and to put in place a strong monitoring mechanism.

The primary objectives of this agency would be to coordinate with state Government and other agencies to streamline implementation and ensure timely completion of projects like roads and highways, inland water transport, Power, Airports etc. It will also work towards opening up and streamlining connectivity with our neighbouring countries including Myanmar, Bangladesh, Bhutan and Nepal. The agency may be structured on the lines of a development authority, with a Chairman appointed by Government of India and supported by an Advisory Board with representation from the region and BBIN Countries.

Well developed infrastructure and a supporting agency to expedite development will be elemental in positioning North East as a services hub catering to the fast growing economies in its vicinity. With a very resilient GDP of 2.4 trillion dollars in ASEAN and 2.3 trillion dollar in India the demand for world class services will continue to outstrip services. Adding to that demand for services will be countries like Bangladesh, Bhutan and Nepal.

We are happy to have Deloitte India as our knowledge partner and thank them for their support in coming out with this Paper which makes an attempt to highlight opportunities in the service sector – Healthcare, Education & Tourism.

We hope the paper will be useful as a reference document for initiating discussions on implementation of service sector linkages between NE India and the Neighbouring countries.

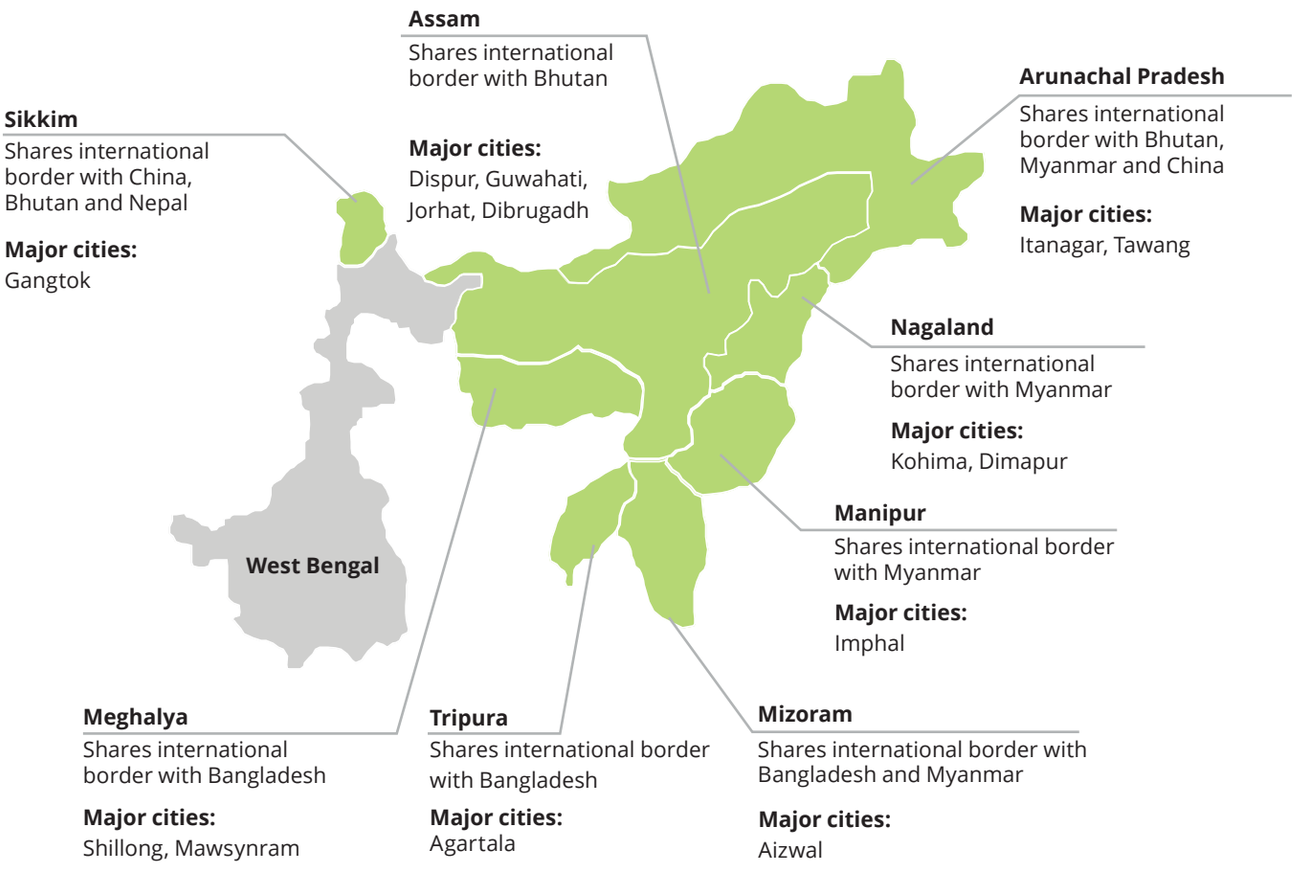


Mr. Ranjit Barthakur
Chairman
FICCI, North East Advisory Council

Introduction

Geographical perspective:
North East India comprising the eight States of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura, and Sikkim covers an area of 262,000 sq. km. It comprises 7.8% of the land area of the country. The largest state in terms of the area is Arunachal Pradesh which occupies an area of 83,743 sq. km followed by Assam which occupies an area of 78,438 sq. km. The smallest of all the 8 states is Sikkim which has an area of 7,096 sq. km.





Snapshot of the North Eastern States[1]:

States	Area (Sq. Km)	Population (2011 Census), in '000	GSDP at constant prices, 2014-15 (base 2011-12), in lakhs	Annual per capita income, in INR
Arunachal Pradesh	83,743	1,384	13,54,080	82,874.04
Assam	78,438	31,206	166,70,884	45,692.11
Manipur	22,327	2,856	15,03,029	43,347.68
Meghalaya	22,429	2,967	21,15,183	58,487.61
Mizoram	21,081	1,097	9,63,364	70,551.95
Nagaland	16,579	1,979	14,11,536	58,997.88
Sikkim	7,096	611	12,88,249	1,77,441.03
Tripura	10,486	3,674	25,08,632	58,888.01

The region shares international boundaries with China to the North, Bangladesh to the South West, Bhutan and Nepal to the North West, and Myanmar to the East.

This region is connected with the rest of India only through a narrow corridor in North Bengal, known as 'Chicken's Neck'; the approximate width of the 'Chicken's Neck' is ~33 km on the eastern side and ~21 km on the western side.

Physical infrastructure – Roads and Power[2]

Since independence, while there has been less development in the North Eastern region, there has been special thrust in recent years to develop North East through the 'Look East' and 'Act East' policies of the Government of India which has been suitably supported by the State Governments of the respective states.

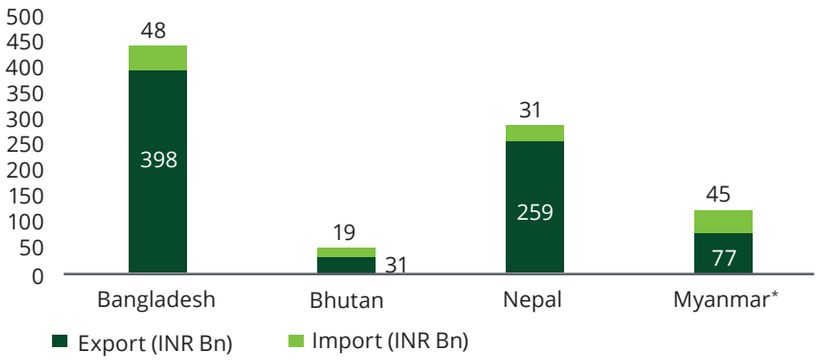
States	State wise Road length (In Kms)	State wise power availability (Mn Units Net)	International Airports	Domestic Airports	
				Operational	Non-Operational
Year	**2015-16**	**2015-16**	**2017**	**2017**	**2017**
Arunachal Pradesh	25,362	591	0	0	3
Assam	3,26,512	8,272	1	2	1
Manipur	24,247	810	1	0	0
Meghalaya	13,372	1,725	0	1	1
Mizoram	9,831	455	0	0	1
Nagaland	37,176	739	0	1	0
Sikkim	7,450	406	0	0	0
Tripura	37,384	1,146	0	1	3
Total North East	**4,81,334**	**14,144**	**2**	**5**	**9**
ALL INDIA	**45,72,144**	**10,90,713**	**21***	**77***	

Source: Airports Authority of India (http://www.aai.aero/misc/Aerodrome_Database_DP.jsp, updated on 25/07/2017);
*Annual Report 2015-16, Airports Authority of India

Efforts are underway to improve the infrastructure of the states to attract investors, particularly in the industrial and services sectors. Construction of National Highways has outpaced that of the Indian average while road construction have kept pace with the country, which is commendable in the region given its hilly and difficult terrain. Improvement in infrastructure is likely to positively impact industries such as tourism and healthcare.

Trade with neighboring countries:
India's collective trade with its neighboring countries in the east (except China) amounted to INR 725 Bn, of which 84% were exports. To develop such trades along Bangladesh, Bhutan, and Nepal, the BBIN Corridor was envisaged and established with emphasis on agreement of free motor vehicles movement. The BBIN Motor vehicle Agreement was rooted in the South Asian Growth Quadrangle and was tasked with improving border connectivity, boosting trade among member countries, and strengthening sub-regional economic integration. The North East region lies at the heart of geographic connectivity among these nations. Hence, development in North East, given its strategic location, will ensure it becomes a dominant player in India's economic growth plan in the region.

Trade with neighbouring countries (INR Bn), 2016



Source: Annual Report 2016-17, Ministry of Commerce

Development of tourism as a strategically important sector in the region:

The North East region is strategically located to attract tourists from ASEAN countries and beyond. The region has a long international border of ~5436 kms[3] and shares borders with Bangladesh, Bhutan, China, Myanmar, and Nepal. Each of the eight states in the region offer distinct cultural and natural attractions. The natural beauty of the place, rivers and mountains, Buddhist monasteries, pilgrimage sites, serene natural environment, exotic flora and fauna, unique tribal culture, folk dance and music in the North Eastern region together offer an opportunity for development of tourism in the region. With 3 UNESCO world heritage sites located in this region and North East Tourism Circuit being developed under the Swadesh Darshan and PRASAD scheme, North East India provides a huge opportunity to attract tourists from other states in India and abroad.

However, to promote tourism in the region, it is imperative to develop basic infrastructure that provides safe and convenient travelling options for tourist flow.

Development of healthcare industry and medical tourism:

In the North Eastern States, healthcare is developed primarily in the urban areas. With rough and difficult hilly terrains, it is often difficult for rural people to reach the tertiary health care facilities. To improve last mile connectivity and extend healthcare facilities at affordable costs, infrastructure development needs to be speeded up. Further, North East has the potential to be developed into a hub for medical treatment and medical tourism, attracting visitors from South and South East Asia.

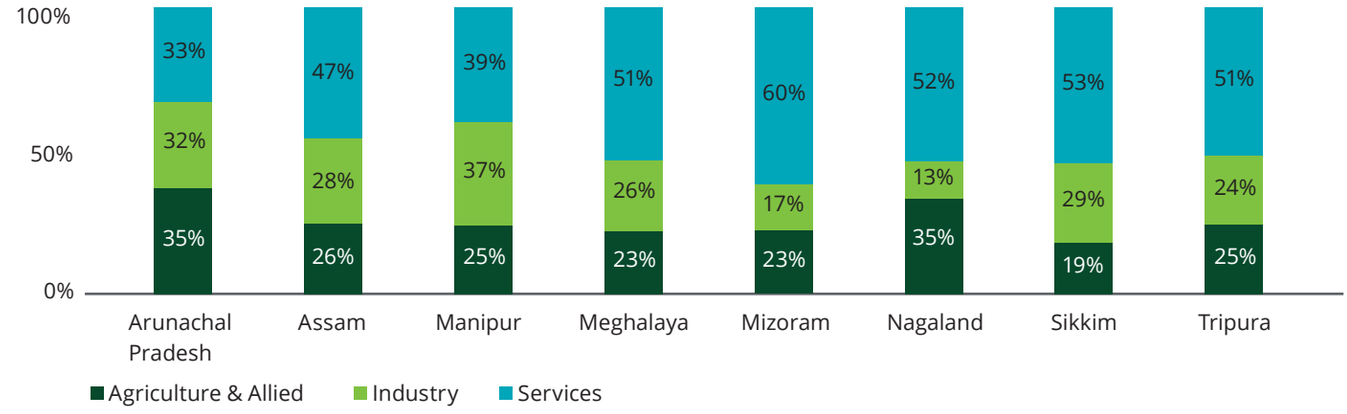
However, further improvement in infrastructure is desired for the development of the North East region as it plays an important role in the geopolitical scenario of India in developing trade with neighboring countries such as Bangladesh, Bhutan, Nepal, Myanmar, and other ASEAN countries and establish India as a regional leader in terms of trade influence.

Development of higher education and skilling sector[4]:

Over the years, Indian economy has seen a shift of focus from agro based livelihood to services sector, the latter contributing the highest to the GDP. The

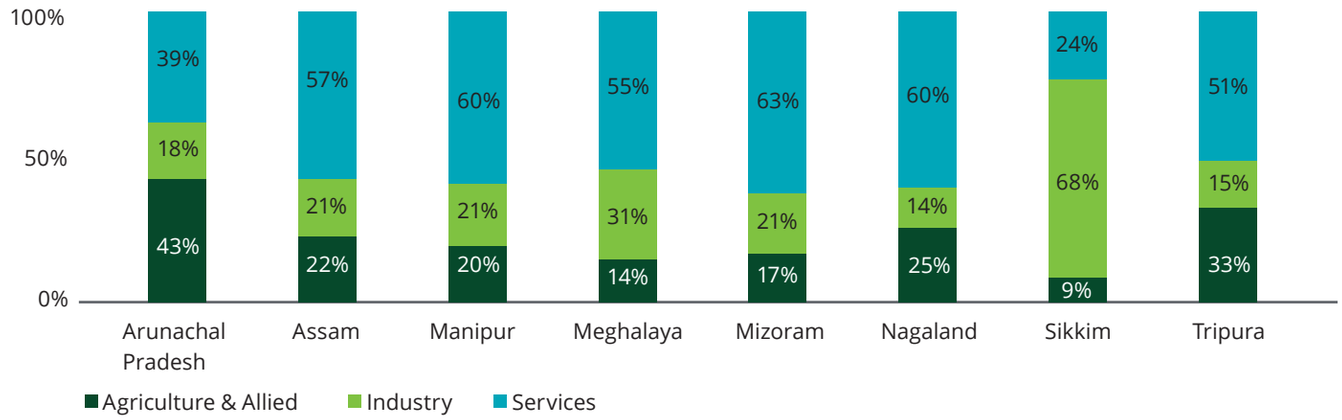
North East region is no exception. With the exception of Arunachal Pradesh and Sikkim, services sector has seen a growth in the region. Government through its policy and schemes like North East BPO Promotions scheme has given impetus to growth of the services sector which taps into the highly literate and English speaking youth population. There is a significant demand for higher education in the region which needs to be given proper infrastructure for fulfilling their aspirations.

Sectoral compostion in GSDP, 2004-05



Source: Directorate of Economics & Statistics from each state

Sectoral compostion in GSDP, 2015-16



Source: Directorate of Economics & Statistics from each state

However, due to lack of development in the region in the past combined with a shift in focus from traditional sectors such as agriculture and industrial manufacturing, it is imperative that focus be placed on imparting higher education and skill development of youth to integrate themselves in the changing landscape of the employment scenario dominated by technological innovation.

Overall, there is a tremendous potential for developing the various services sectors in the region by creating possible linkages among the various stakeholders in the ecosystem. In the following sections we focus on each of these sectors in detail covering aspects like key issues, measures to address it and how north east can be developed as part of market linkage development with focus on neighboring countries like Bangladesh, Bhutan, Myanmar and Nepal.


HOTEL



Tourism

Overview of the tourism industry in India:
Tourism sector is one of the largest employment generators in India and plays a significant role in promoting inclusive growth of the less-advantaged sections of the society and poverty eradication. The main objective of the tourism policy in India is to position tourism as a major engine of economic growth and harness it's direct and multiplier effect on employment and poverty eradication in a sustainable manner by active participation of all segments of the society. Apart from marketing and promotion, the focus of tourism development plans is also on integrated development of tourism infrastructure and facilities through effective partnership with various stakeholders.

Based on the reason driving tourism in a location, the main categories of tourism can be identified as:

Category	Characteristics	Time Spent in Country	Spend per Trip
Leisure tourism	• Maximum number of tourists fall under this category • Includes both inter-state and foreign tourists • Major drivers for this type of tourism are well-equipped hotels, good connectivity, scenic natural beauty, etc.		
Religious tourism	• Highly seasonal, driven by religious activities occurring at a particular short time of the year • Low spending per trip from these type of tourists		
Medical/Wellness Tourism	• Usually associated with travel taken for conducting complex operations at a significant low cost without compromise on the quality • Availability of significantly high skilled doctors and other skilled labor is a necessity for driving tourism • Infrastructure required to drive this type of tourism include state of the art healthcare services providers, hospitals, diagnostic labs, pharmacies etc. and/or spa, yoga centers, Ayurveda centers, naturopathy houses etc.		
Educational tourism	• Requirement for large number of developed institutions, training facilities and job opportunities is essential for the location to drive students and aspiring professionals/ workers		
Business tourism	• Driven generally by foreign and inter-state tourists who travel to these locations for work • Positive business environment, stable political system and ease of doing business are key drivers		

Source: Deloitte Analysis

6 weeks + 3-6 weeks 2-3 weeks 0-1 week

High Spend Moderate Spend Low Spend



Over the past decade, India has seen a robust growth in number of both foreign tourists and domestic tourists visiting the country. While domestic tourism has seen a growth of ~14% due to better infrastructure and connectivity combined with rise in income levels, foreign tourist arrivals have increased by ~7% due to better facilities being offered and higher sense of security.[5]

The top 10 states constituted ~83% of the total tourist visits in 2015[6]. This may be attributed to focused approach by stakeholders in developing the tourism industry in the states, particularly in Tamil Nadu where medical tourism is one of the key sectors that attract domestic and foreign nationals due to state-of-art and low cost medical facilities available.

Despite being one of the most resource rich regions in India with extensive flora and fauna to attract tourists, the North East region saw ~0.6% of total tourist visits[7]. This may be due to low connectivity to Indian hinterland or lack of awareness among tourists about places to visits, cultural heritage etc.

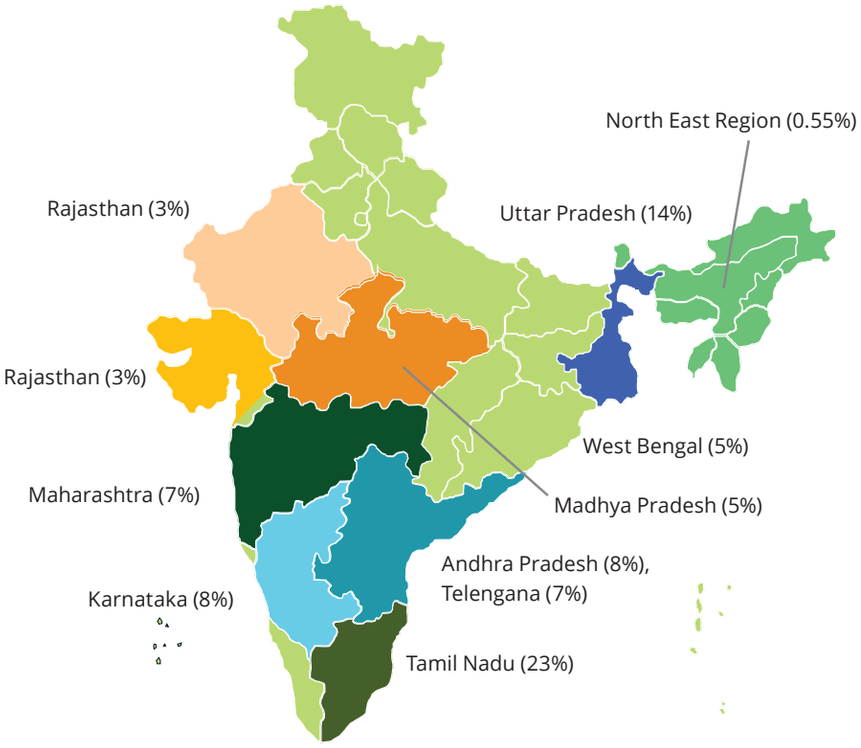
Domestic Tourist Visits and Foreign tourist arrivals as a % of total tourist visits in NER



Source: India tourism Statistics, 2015



State-wise share of total tourist visits in India – Top 10 states



Source: India tourism Statistics, 2015

Role of Tourism in economic development of India

Tourism in India accounts for 9.6%[8] of the GDP & is the 3rd largest foreign exchange earner for the country. In December 2016, the country earned foreign exchange of ~USD 2.12 billion, from the tourism sector.

The sector has high employment potential with approximately 90 jobs creation per USD 15,000 of investment[9] The sector in India is estimated to account for ~9% of the total employment opportunities generated in the country in 2016[10]. Direct contribution of tourism to employment was ~2.5 crore jobs which was ~5.6% of total employment in the country[11].

On the basis of multiple factors such as growth in economy, higher urbanization levels, growth in disposable income, infrastructure development etc. tourism sector has seen immense growth over the past few years and is one of the leading contributors to the Indian GDP that is comparable with Mining, Information Technology and Automobile industry.[12]

9.6%
Travel and Tourism's contribution to GDP

USD 71 Bn
Direct contribution to GDP

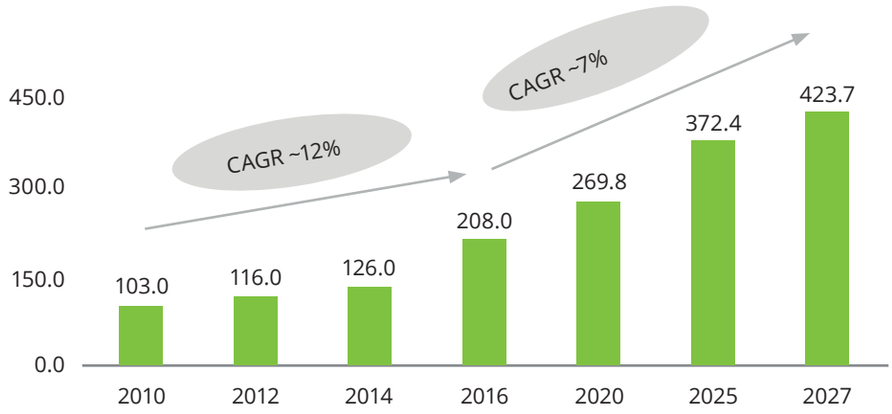
3rd
3rd highest foreign exchange earner

9%
Of Total employment generated in India

90
90 Lakh jobs generated per USD 15,000 investment

2.5 Cr
Generated 2.5 crore direct jobs

Travel & Tourism's total contribution to GDP (USD Bn)



Source: World Travel and Tourism Council's Economic Impact 2017

Key Growth Drivers for the Industry[13]

Some of the key growth drivers to support the growth of the tourism industry are Government support, investment from public and private sector to build connectivity infrastructure, and economic growth.

1 Government Initiatives

Foreign Direct Investment

- 100% FDI in the sector allowed under the automatic route

Incredible India Campaign

- Launch of campaigns such as "Incredible India!", Colors of India, Atithi Devo Bhavah and the Wellness Campaign to promote the Indian tourism

National Tourism Policy (NTP):

- The GoI launched the NTP in 2015 to encourage citizens to explore their own country as well as position the country as a 'Must See' destination for global travelers

Budget Allocation:

- The Ministry Of Tourism has been allocated USD 238 Mn in 2015-16 for development of tourism in the country

Tax exemption:

- Five year Tax Holiday provided for 2/3 /4 star category hotels located in all UNESCO declared World Heritage sites

2 New Schemes

Visa on Arrival (VoA)

- The Government has extended the VoA enabled ETA facility for 43 countries in November 2014. The facility is operational at nine major international airports
- Aimed to facilitate the tourists to travel for tourism, short term medical treatments or casual visit and have a short stay of 30 days

Swadesh Darshan and PRASAD

- The Swadesh Darshan scheme is aimed at integrated development of tourist circuits around specific themes.
- The five circuits identified under this Scheme are Buddhist Circuit, Himalayan Circuit, Coastal Circuit, Krishna Circuit, and North-East Circuit
- PRASAD scheme aims to develop religious tourism

Swachh Bharat:

- The main purpose of this scheme is towards a cleaner India by protecting and preserving the sanctity of monuments of national heritage

3 Investment in infrastructure

Foreign Direct Investment

- Hotel and Tourism related industry declared as high priority industry and FDI up to 100% under the automatic route

New passenger terminal

- The government has launched construction of new Passenger Terminal at Marmugao, Goa Port Trust to promote Cruise Tourism

Public Private Partnership:

- The Ministry Of Civil Aviation plans to privatize of four major airports under JV/PPP model on policy of development of Greenfield airports which envisages synergy between the public and private sector

Rural Connectivity:

- Formulation of a policy for promotion of regional and remote area connectivity in India incentivizing the Indian carriers to operate on these routes including code sharing and seat credit mechanism

4 Economic growth

Higher Capital investment in Tourism

- Capital investment in tourism sector grew from USD 29 Bn in 2009 to USD 34 Bn in 2016

Rising per capita income and disposable income

- India's per capita GDP (constant price) has gone up from USD 974 in 2011-12 to USD 1300 in 2014-15, fueling a consumption boom
- This has led to rise in urbanization which is expected to reach ~40% by 2040

Growth in domestic spending on tourism:

- In 2016, domestic spending on tourism constituted 88% of total spending in the sector
- Domestic spending on tourism saw a CAGR of ~17% from 2010 and reached ~USD 167 Bn in 2016

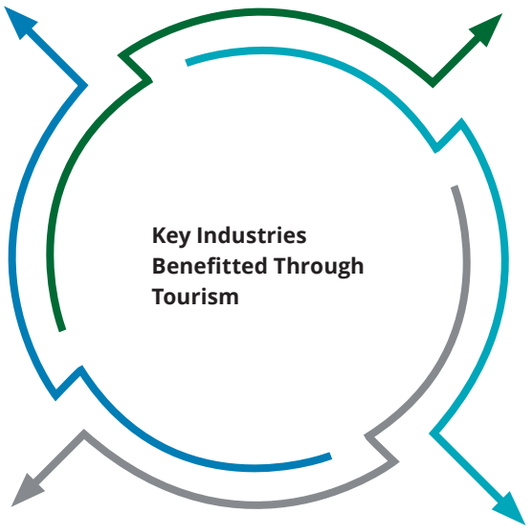
Key sectors that benefits directly/ indirectly from tourism include:

While tourism is an important contributor to the GDP, it also tends to impact the growth of other industries.

Ancillary industries such as Hotels & Accommodations, Tour Operators, Travel Agents, Transport service providers have a direct linkage with growth in tourism, industries such as entertainment and leisure and banking & financial services are also affected. Some of the key industries along with characteristics are listed below:

Accommodation & Catering

- Accommodation could be hotels and motels, apartments, camps, guest houses, lodge, bed and breakfast
- As of 2016, Capital Spending on Tourism industry increased by ~6% to reach USD 36 Bn from 2009
- International hotel chains are increasing their presence in the country



Financial Services

- After demonetization, there is higher need for Point-of-Sales Card Swiping machines
- Banks often offer these machines to retailers and service providers for a fee
- Higher investments in the tourism sector is also drawing in institutional investors to invest in the sector

Entertainment & Leisure

- High urbanization and rise in income has led to growth in demand of healthcare services such as Spas, yoga centres etc.
- Ayurveda is another major theme that is catching the attention of tourists globally

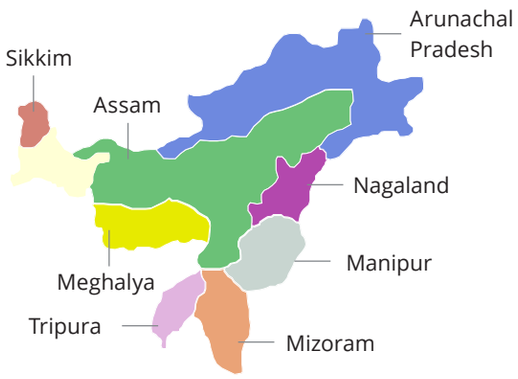
Travel Trade Services

- Travel Trade Services such as transportation, tour operators, Tour guides etc. are required for smooth operations and delivery of quality service to tourists
- There has been a surge in internet based radio cab operators in metros and other cities in India

Source: Deloitte Analysis

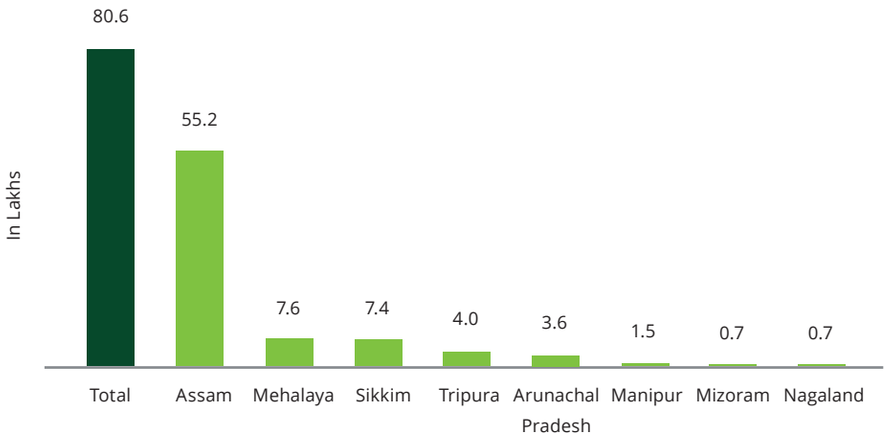
Overview of Tourism in the North East

The location of the region is strategically important as it shares its border with Bangladesh, Bhutan, China, and Myanmar. The natural beauty of the place, rivers and mountains, Buddhist monasteries, serene natural environment, exotic flora and fauna, unique tribal culture, folk dance and music in the North Eastern region together offers an opportunity for development of tourism in the region.



Domestic tourist visit to North East: 79.4 Lakhs
Foreign Tourist Arrivals in North East: 1.18 Lakhs

Total Number of Tourist Visits in North East in 2015



Source: India Tourism Statistics, 2015

Each state in the region has its own distinct feature and together the region is endowed with diverse tourist attractions. Of the 35 UNESCO identified World Heritage Sites in India, three are in this region–**Kaziranga Wildlife Sanctuary** and **Manas Wildlife Sanctuary** in Assam; and **Khangchendzonga National Park** in Sikkim.[14]

The number of tourist arrivals in Northeast India has increased from 6.43 million in the year 2011 to 8.06 million in 2015 at a CAGR of almost 5.8%. In the last few years there has been a steady rise in the number of domestic and foreign tourist arrivals in the region, however **Northeast India still accounts for less than 1% of the total tourist arrivals in India.** This may be attributed to the lack of proper infrastructure, inadequate marketing, and scarcity of skilled manpower and absence of a broad tourism policy for the region as a whole.

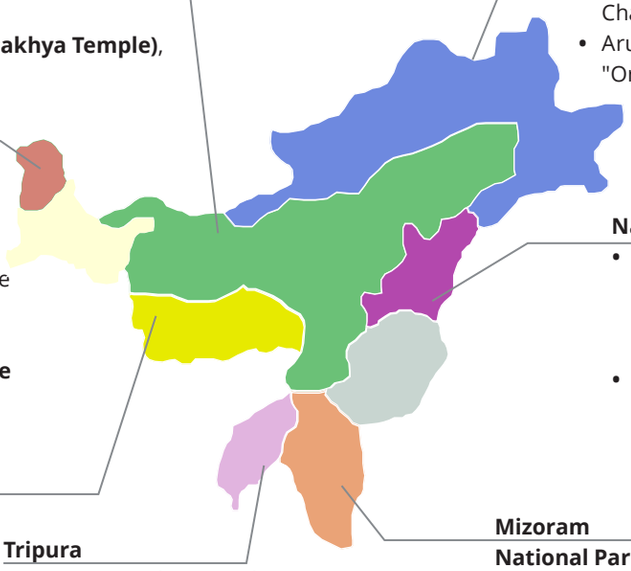
Key tourist spots in the North Eastern Region:

Assam
- **Wildlife Sancturies:** Bhejan-Borajan-Padumoni etc.
- **National Parks: Kaziranga, Manas**, Orang,.
- **Leisure/scenic beauty spot:** Chandubi, Bhairabkunda,
- **Pilgrimage sites: Guwahati (Kamakhya Temple)**, Hajo

Sikkim
- The state is known for domestic tourism to see the various mountain peaks of HimalyaCho Lhamu lake is the highest lake in the country and sixth highest in the world
- Buddhist Monasteries of prominence such as **Pemayangtse Monastery** attrach tourists from abroad

Meghalaya
- **Cherapunjee and Mawsynram** are famous for all round rainy season
- Caving is a major tourist attraction in the state

Arunachal Pradesh
- Tawang (a town with a Buddist monastery)
- Ziro (which holds Ziro music festival)
- Namdapha Tiger project in Changlang district
- Arunachal Pradesh is also known as "Orchid Paradise"



Nagaland
- The prefered tourist destination in the state are Kohima, Dimapur, Mokokchung, Longleng etc.
- The Hornbill Festival which showcases the tribal heritage of the state is a major tourist attraction

Tripura
- Tripurasundari Temple
- Neermahal Palace
- Heritage Park
- Sepahijala Wild life Sanctuary

Mizoram

National Parks:
Ngengpui Wildlife Sanctuary, Phawngpui National Park, Thorangtlang Wildlife Sanctuary

Source: Deloitte Analysis

North East is one of the most bio-diverse regions in the world, consisting of large portions of land under tropical forests, with various valuable resources like bamboo, cane, wood and precious medicinal plants. Forest-based industries such as plywood mills, paper mills, saw mills constitute an integral part of the economy. The North Eastern States are rich in natural beauty with snow-peaked mountains and white water rivers coupled with places of historical and religious importance, this region offers one of the pristine tourism experience.

Key initiatives by state governments in the North East Region to promote tourism

Along with the Central Government schemes, the various state governments have also taken up initiatives to promote and market the region as a prime tourist destination. Some of the key initiatives taken by the state governments are:

State	Budget Allocation	Other Initiatives
Arunachal Pradesh[15]	• Under the Swadesh Darshan scheme, for the development of adventure tourism in the state, USD 4.56 Mn was sanctioned by the state government, during 2016-17	• The Government inked an MoU with the Indian Railway Catering and Tourism Corporation for promoting the tourism sector • The Government is working on simplifying the process of application & issuance of the Inner Line Permit to make the state more visitor friendly
Assam[16]	• Under the Swadesh Darshan Scheme the government has sanctioned USD 15.26 Mn for a heritage circuit • Under the Prasad Scheme the government sanctioned USD 5.19 Mn for the expansion of Kamakhya temple and other pilgrimage destinations	• The state government has proposed to handle more road shows across the National and International level and will also be constructing a Tea Museum in Dibrugarh • Assam Tourist Development Corporation has signed a MoU in Guwahati with Rightstay, a subsidiary of MakeMyTrip, to promote homestay
Manipur	• In 2016, the state organized the 10-day Manipur Sangai Festival, themed 'Destination Manipur' to promote the state as a tourist destination • 2projects – Loktak Tourism/Wild Life Circuit & Ethnic/Adventure Tourism Circuit have promoted investments in state's tourism sector	
Meghalaya[17]	• Under budget 2016-17, the state government sanctioned USD 5.43 Mn for development of the tourism sector	• In November 2016, with an aim to promote motor sports & tourism, the state organized the 2nd edition of 'Bilgaro Challenge 2016' • The state government established 2 recreational parks in Mairang & Marngar
Mizoram[18]	• During 2015-16, USD 7.38 Mn was released by the Government of Mizoram for promoting growth of Integrated Development of Eco-Tourism Mega Circuit in Mizoram • The state government also sanctioned USD 1.22 Mn for the development of Theme Park & Eco Tourism in Lungleng and USD 0.76 Mn for the development of Chalfilh as a tourist destination	• In 2016, Government of Mizoram drafted Eco-tourism policy to promote eco-tourism in the state. • The policy seeks to turn the state into a tourist destination popular for its flora and fauna

State	Budget Allocation	Other Initiatives
Nagaland[19]	• During 2015-16, under the Tribal Circuit theme of Swadesh Darshan scheme, an amount of US$ 14.87 million was sanctioned	• The state government is looking to promote investments in the sector through creation of tourist complexes, eco-tourism, adventure tourism, etc.
Sikkim[20]	• During 2016-17, an allocation of US$ 2.56 million was proposed by the Government of Sikkim for development of tourism sector in the state	• Promotion of village tourism, homestay, cultural tourism, trekking tourism, ecotourism, wellness tourism, flori–tourism and adventure tourism has given fillip to the tourism trade in the state where a large of number of people are engaged under different employment opportunities
Tripura	• The Bhramakunda's and Chhabimura's Destination Development Projects have been launched in 2015-16	

Potential for development of tourism in the North East Region

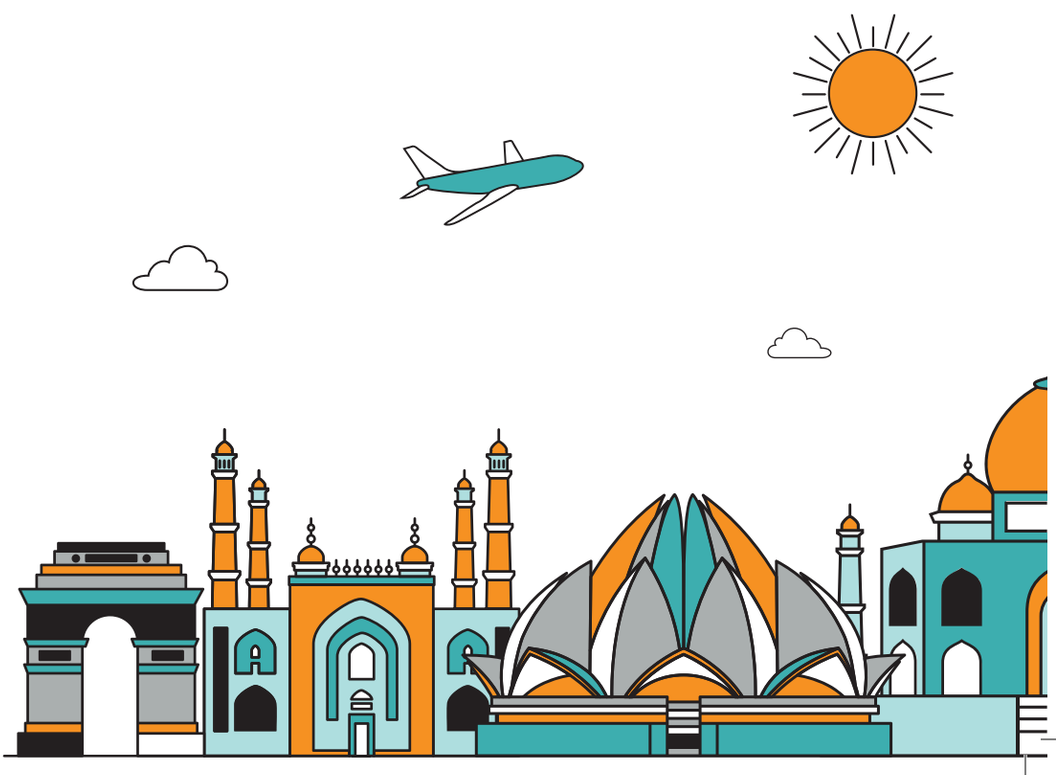
North East India is one of the most diverse and naturally resplendent resource rich region of the country. From the lofty heights of the Himalayas to the massive riverine systems of the Brahmaputra, the North East region is a microcosm of the geographical diversity found in the rest of the country.

Special efforts have been made both from the Central as well as the state governments to improve tourism in the region.

Government of India has identified various circuits that may be developed across the region to showcase the natural beauty of the region as well as highlight the regions culture.

Due to the geographical and cultural diversity in the region, some of the key themes contributing to the growth of tourism in the region are adventure and wildlife tourism, pilgrimage tourism and tea tourism, with tea being one of the most important commodity being produced abundantly in the region supporting livelihoods of many people.

A. Identification of tourist circuits:
The Government of India has identified the need to develop various tourist circuits across the states in India based on specific themes, geography, heritage, and other factors such as social or religious importance, medical tourism etc. In 2014, the Ministry of Tourism launched the Swadesh Darshan scheme under which it identified 18 Circuits spread across various states for development of tourism in India. Under the plan scheme 'Swadesh Darshan' and 'PRASAD' the Ministry of Tourism provides Central Financial Assistance (CFA) to State Governments/Union Territory Administrations, for various tourism projects subject.

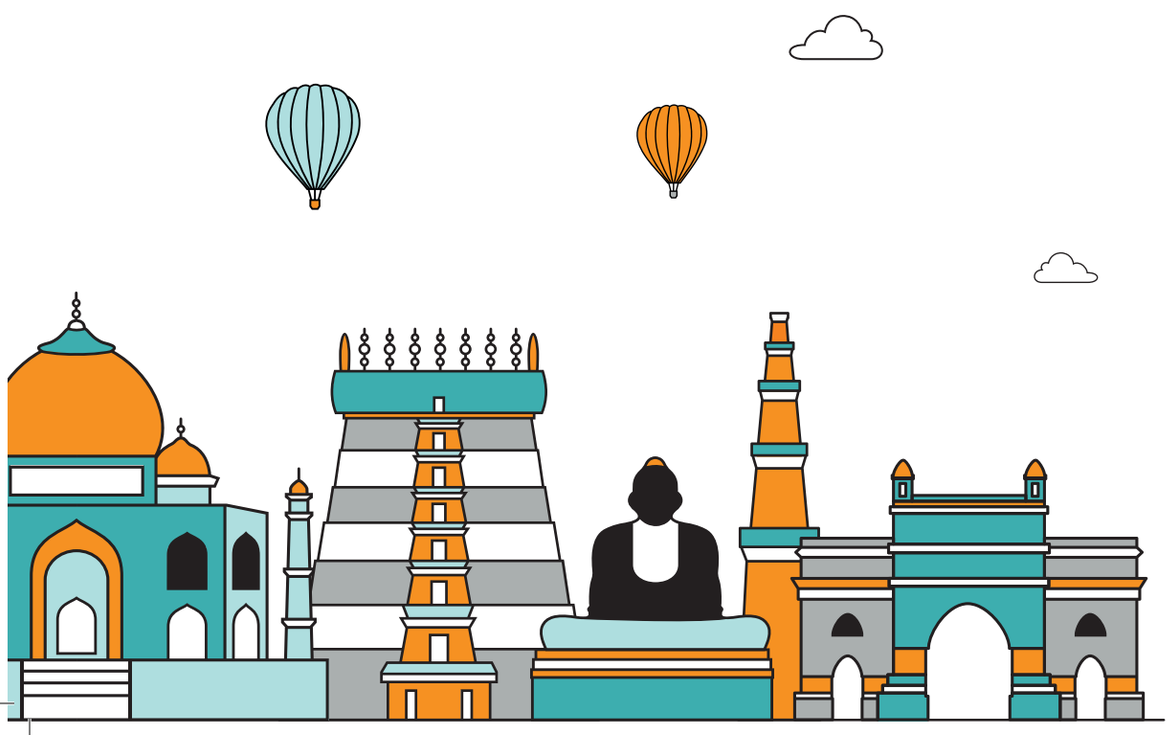


The circuits and the projects under Swadesh Dashan scheme include[21]:

S. No.	Name of Theme	State	Name of Project
1	North East India Circuit	Arunachal Pradesh	Bhalukpong – Bomdila -Tawang in Arunachal Pradesh
		Manipur	Imphal –Moirang – Khongjom – Moreh, Manipur
		Sikkim	Rangpo (entry) - Rorathang - Aritar - Phadamchen - Nathang - Sherathang - Tsongmo - Gangtok - Phodong - Mangan - Lachung - Yumthang - Lachen - Thangu - Gurudongmer - Mangan - Gangtok - Tumin Lingee - Singtam (exit) in Sikkim
		Arunachal Pradesh	Adventure Tourism in Arunachal Pradesh under North East Circuit of Swadesh Darshan
		Tripura	North East Circuit : Agartala - Sipahijala - Melaghar - Udaipur - Amarpur - Tirthamukh - Mandirghat – Dumboor- NarikelKunja - Gandachara – Ambassa in Tripura.
2	Tribal Circuit	Nagaland	Peren –Kohima-Wokha, Nagaland
3	Wildlife Circuit	Assam	Manas– Pobitora- Nameri- Kaziranga- Dibru Saikhowa as Wild Life Circuit in Assam.
4	Eco Tourism Circuit	Mizoram	New Eco-Tourism under Swadesh Darshan-North East Circuit at Thenzawl & South Zote, District Serchhip and Reiek, Mizoram.

Some of the other established tourism routes / regions in various states include[22]:

S. No.	State	Name of Project / Regions
1	Assam	National Park Mega Circuit covering Manas, Orang, Nameri, Kaziranga, Jorhat, Sibsagar and Majouli
2	Manipur	INA Memorial
3	Sikkim	Gangtok
4	Tripura	Mega Lake Circuit including Mata Bari



B. Emerging themes for attracting tourism in the North East Region

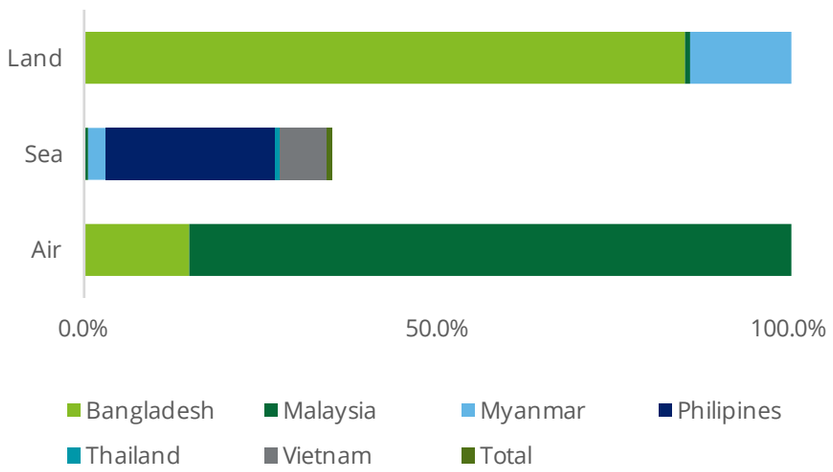
Key Themes	Features that support the themes
Adventure & Wildlife Tourism	• Given the rich flora and fauna in this region, certain heritage sites like **Kaziranga and Manas** Wildlife Sanctuary (Assam) offer attractive tourism spots. • Development of **Manas– Pobitora- Nameri- Kaziranga- Dibru Saikhowa** as Wild Life Circuit • Sites for development of **adventure tourism** like river rafting , trekking etc. identified and developed in collaboration with private players in order to ensure safety and basic amenities for the adventure seeking tourists • Due to the high potential for development of wildlife tourism in the state, the central government has increased the funds under the centrally sponsored **"Integrated Development of Wildlife Habitats"** scheme towards Assam • The **Indian National Army Memorial at Moirang**, where the Indian National Army hoisted the tri-color flag for the first time on Indian soil is a very popular destination for tourists • **Caving** is a major tourist attraction in the Meghalaya, as most of the deepest & longest caves in South Asia are located in the state • **Cho-Lhamu lake** situated in Sikkim is the highest lake in the country and sixth highest in the world, is fast becoming a major tourist attraction.
Pilgrimage, Cultural & Eco tourism	• **Kamakhya** temple in Assam is one of the most sought after pilgrimage destination attracting a large number of domestic tourists throughout the year • Recently, National Geographic has identified **Mawlynnong**, Meghalaya as the cleanest village in the world. • Ministry of Tourism, Government of India, awarded the capital city of Sikkim, Gangtok, with the title of 'Cleanest Tourist Destination' in the country • **Mawsynram**, Cherrapunji is another place which is famous for getting the highest rainfall throughout the year. Such places offer huge potential for attracting foreign tourists. However proper steps can be taken to protect the heritage of these places. • During 2015-16, USD 7.3 Mn[23] was released by the Government of Mizoram for promoting growth of Integrated Development of **Eco-Tourism Mega Circuit** in Mizoram. • Cultural circuits can be developed in certain locations based on their history, culture and skillsets of the local community. **Tribal Circuit** Peren –Kohima-Wokha can be developed to showcase the tribal lifestyle, handicrafts and history of the area • Widespread promotion of **Hornbill festival in Nagaland** as a mélange of cultural heritage of the tribes in Nagaland • The **Ziro Music Festival**, an outdoor music festival, held in Ziro valley in Arunachal Pradesh, which celebrates the independent music scene in India is widely popular in the region
Tea Tourism	• There are approximately 700 tea gardens in North East India • Assam leads the tea production in India with over ~ 50% of the total tea produced • States such as West Bengal has a Tea Tourism policy in place which allows individual tea gardens to promote tea tourism without affecting production quantity • Assam and other states in the North Eastern Region have huge potential for developing tea tourism along lines of West Bengal • State governments may focus on developing tea tourism through well-articulated policy guideline

Key Themes	Features that support the themes
River Tourism	• Recently a Memorandum of Understanding was singed between India and Bangladesh under which passenger cruises shall be allowed under the coastal and protocol routes between the two nations • Post the signing of this memorandum, there is potential for developing the Assam and Bangladesh circuit through Brahmaputra and Barak Rivers for river tourism. • This provides an opportunity to cruise operators to explore this route which has always had potential but could not be utilised before the memorandum was singed • Select cruise operators in the region have already started planning for introduction of cruise on the Assam - Bangladesh route

C. Strategic location of the region

Bhutan, Bangladesh and Myanmar are the neighbouring countries of North-East. Bhutan is located between Sikkim and Arunachal Pradesh and it is to the north of Assam. Bangladesh borders Tripura and Mizoram. Given, the large amount of international border that the region shares with these countries, there is a huge potential for developing this region can be developed to become one of the important hub in the South East Asian tourist circuit.

Percentage of Tourist arrivals by various modes of tansport, 2015



	Bangladesh	Malaysia	Myanmar	Philipines	Thailand	Vietnam	TOTAL
Air	14.7%	99.2%	64.1%	76.1%	81.6%	79.8%	84.5%
Sea	0.1%	0.3%	2.8%	23.8%	0.8%	6.5%	0.70%
Land	85.2%	0.5%	33.1%	0.1%	17.6%	13.7%	14.8%

Source: India Tourism Statistics, 2015

While air travel to India remains the most preferred route to enter India, tourists from South and South East Asia, particularly from Bangladesh are an exception. Tourists from Bangladesh which share borders on all three sides with India prefers road travel to India.

Therefore, investing in improving connectivity in the region in terms of roads and airports remain essential along with development of international airports to attract tourists from other regions

Country	Connectivity and Points of Entry	Entry Restrictions	Possible circuit development
Bhutan	• The main points of road entry for Bhutan are through Phuntsholing in the south that links Bhutan with West Bengal, through Gelephu and Samdrup Jongkhar that links with Assam • Bhutan is connected by air (Druk Air - the National airline of Bhutan) to Paro (Bhutan's only international airport). Paro is connected by air to Bangkok, Delhi, Kolkata, Bodh Gaya, Dacca, Kathmandu and Guwahati • There are no trains from India to Bhutan.	• Non-ratification of Bhutan Bangladesh India Nepal Motor Vehicles Agreement (BBIN MVA) by Bhutan has placed a restriction on free movement of road vehicles from India. • However, the Indian vehicles can enter Bhutan with required permissions from immigration office and vice versa.	• With these entry and connectivity restrictions, the most possible circuit at present is Sikkim to Bhutan (West Circuit) through Phuntsholing. This circuit is possible only by road as air connection does not exist between Bagdogra and Paro. The circuit referred is Gangtok (including other nearby places) – Siliguri – Phuntsholing (entry point for Bhutan) – Thimpu (including other places of Western Circuit of Bhutan). • The other circuit possible in future is linking Assam, Bhutan and Arunachal Pradesh (Tawang). The circuit is Guwahati – Manas – Samdrup Jonkhar (entry point for Bhutan) – Trashigang – Tawang. • For better facilitation, attempts can be made to make agreements with Government of Bhutan to allow airline operators in India to run flights to Paro. • In the advent of airport coming up in Gangtok, there is possibility to link Gangtok to Paro directly for better tourist facilitation between Sikkim and Bhutan.
Bangladesh	• Good road connectivity of Agartala with Dhaka; has there is a lot of interest in Bangladesh for Shillong hill station and Jampui hill station which can be developed in future, Dhaka-Agartala- Shillong is an attractive and feasible option. • Shuttle luxury tourist bus services may be held in this route	• People from Bangladesh require a visa to enter India, however, the process is generally hassle free	• Dhaka- Agartala- Shillong • Bangladesh to Meghalaya through Dawki to Shillong and in future once western Meghalaya sites develop, through Barengapara. • Bangladesh government is looking to develop tourism in and around Sylhet, existing route between Dauki (Meghalaya) and Sylhet (Bangladesh may be developed to promote tourism

Country	Connectivity and Points of Entry	Entry Restrictions	Possible circuit development
Myanmar	• Connectivity may be developed for passenger connectivity – From Mizoram to Sittwe port – At Zokatwar in Mizoram to Rih Dil Lake side – From Saiha side with respect to Kaldan project in south connecting to Sittwe port – At Moreh in Manipur	• Tourist Visa on Arrival scheme is applicable for citizens of Myanmar at selected international airports in India. • Efforts may be made to extend such facilities to airports in the North East to attract more tourists • Crossing of border at Moreh requires booking of special travel package and tourists have to enter and exit at the same border point in case of travelling through public transport	–

D. Attracting tourists from the Buddhist Tourism and Other Circuits

Buddhism is a popular religion in the South East Asia and a large number of foreign tourists visit the Indian state of Bihar to see the old remains of Nalanda and Bodh Gaya, placed which are considered as the roots of these religion.

Given the proximity of the North East to Bihar, it is imperative to attract these tourists to experience the culture and the rich heritage which North East region offers.

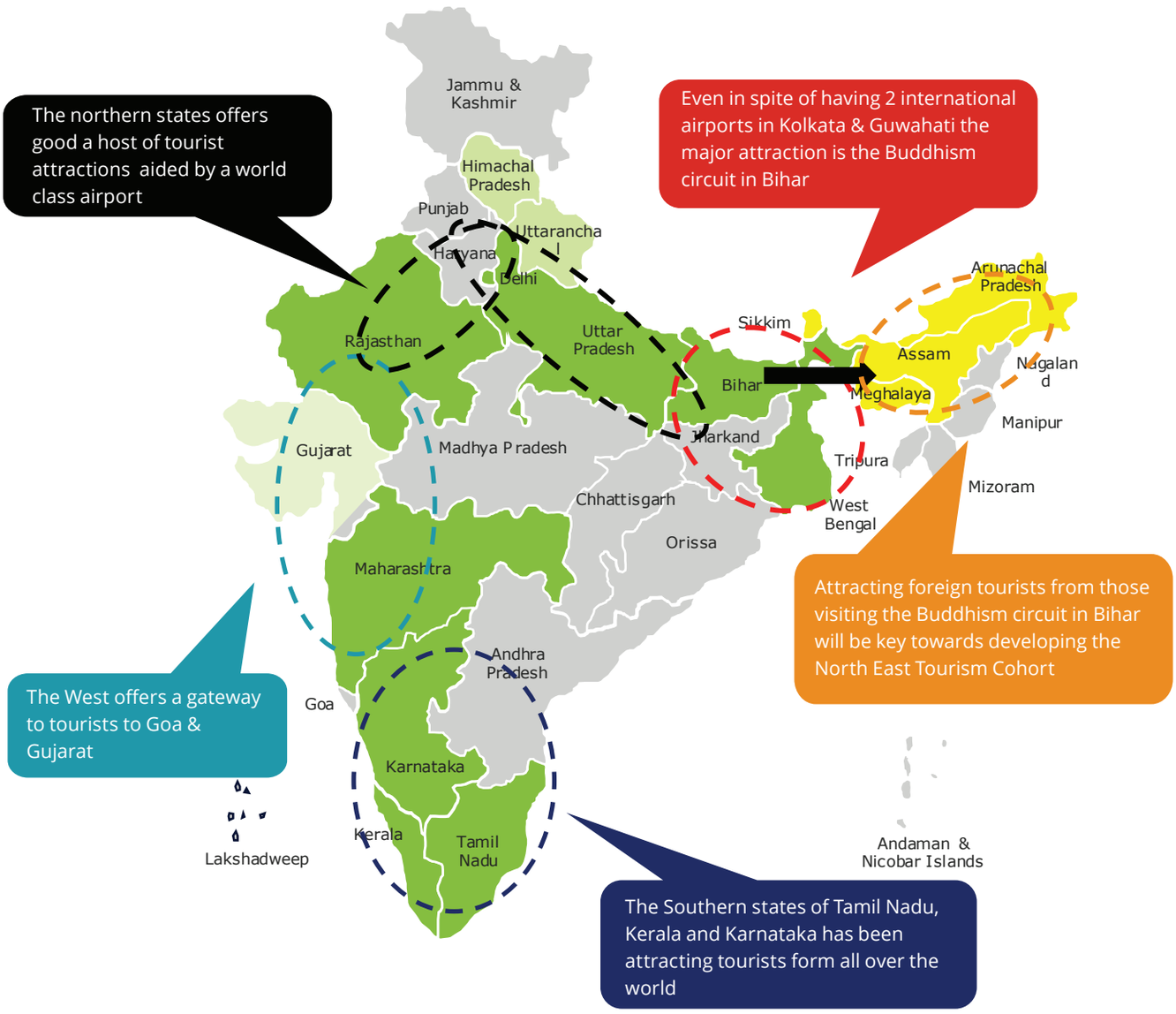
The Ministry of Tourism and the tourism departments of both these states may work together to develop an inter-state circuit with better connectivity between the states, through the airports at Kolkata and Bagdogra.

There are 26 trains between Guwahati to Patna of which only 4 are weekly. Dimapur Patna is connected by 8 trains while only 1 train connect Patna and Agartala. Gangtok, which may attract tourists from the neighbouring country of Bhutan, is not linked directly to Patna but via New Jalpaiguri in West Bengal. Efforts may be made to introduce direct and more frequent high speed trains offering facilities of international standards to attract tourists for development of the Buddhism circuit.

While Assam is well connected to states such as Jharkhand, Bihar, West Bengal and Sikkim through National Highways 31, 31A, 31B and 31C respectively, the rest of the states in the North East Region is only connected to Assam as a gateway to rest of India. Efforts may be made to connect the capitals and the centres of economic importance to neighbouring states of West Bengal, Jharkhand and Sikkim.

There is also the possibility of attracting tourists from adventure and wild life tourism with Bhutan and Myanmar. Bhutan is connected primarily by roads and airport. The two entry points to Bhutan from India are by road from Phuentsholing in West Bengal and Samdrup Jongkhar in Assam. The roads connecting the two nations offer a scenic view. This route is already being explored actively for tourism purpose and especially with Indians not requiring any visa to enter Bhutan offers further ease to explore tourism between the two nations.





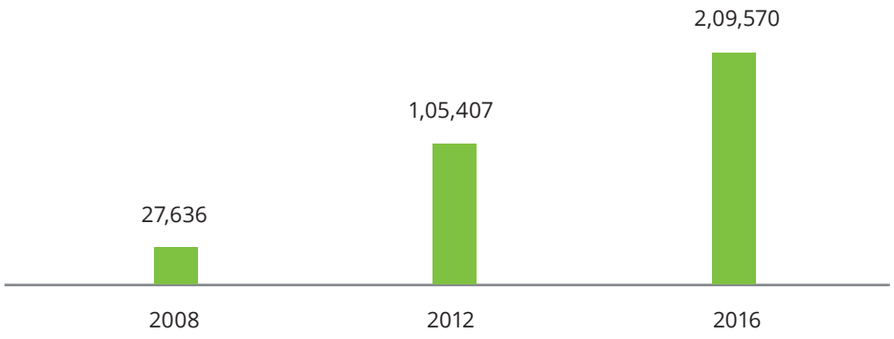
There is also an increased interest in exploring adventure tourism between North East and Myanmar. Travelling through India's north eastern states of Assam, Nagaland and Manipur and crossing into Myanmar through the remote border crossing at Moreh, exploring the less explored western zone of Myanmar and meeting the tribal people on both India and Myanmar's frontier, provides a unique experience to tourists. There is potential in developing these routes connecting North East to neighbouring countries like Bangladesh, Bhutan and Myanmar for adventure, wildlife and cultural tourism which in turn shall boost tourism in North East as well.

Success Story: Bhutan

Bhutan is a land-locked country situated between India and China and has topology similar to parts of North east India. The country has evolved as one of the most exclusive travel destinations in the world – the "last Shangri-La".[24] The rich natural flora and fauna, cultural diversity, different festivals, vibrant wildlife especially bird watching, options for spirituality and wellness, trekking options make Bhutan one of the coveted tourist destination in the world.

Tourism has been one of the mainstay in Bhutan contributing to almost 7% of the GDP[25] and along with hydro power is one of the driving sectors of the economy. Tourist arrivals in Bhutan has grown at a steady pace, most of them being for leisure trips. The growth rate of tourists in Bhutan have grown at ~ 29% (CAGR last 8 years) which is significantly higher compared to its neighbouring countries like Nepal, China, India etc. and even to other major tourism destinations like Malaysia and Thailand.[26] In 2015, export earnings for Bhutan grew by almost 12.9%, supported primarily by growth in tourism.[27]

Tourist Arrivals in Bhutan

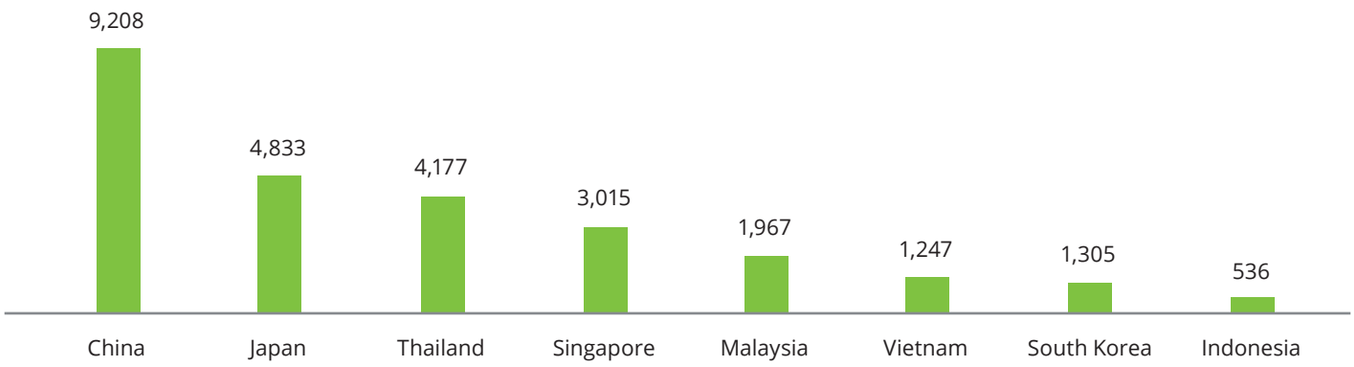


Source: Bhutan Tourism Monitor Annual Report 2013 and 2016

Focus on quality tourism has led to emergence of Bhutan as a preferred destination for people across the globe.

Currently more than 50% [28]of the total foreign tourist arrivals (FTAs) are from Asia Pacific region.

Foreign Tourist Arrivals from Asia Pacific in Bhutan (2016)



Source: Bhutan Tourism Monitor Annual Report 2016.

This has been largely possible due to focus on improved connectivity, proactive government collaboration with private sector, assessment of emerging trends and thrust on developing Bhutan as a destination of sustainable tourism.

Proactive government initiatives
Tourism Policy with focus on **"High Value, Low Impact"** Strategy based on GNH (Gross National Happiness) Philosophy. Despite the controlled tourism policy imposing a daily tariff of USD 200 per day each tourist (during off season) and USD 250 per day per tourist (during peak season), the arrival of foreign tourist has steadily increased.

Impact

- Tourism royalty of USD 65 charged by the Government utilised for **social development** such as providing free healthcare and education
- Reduction in low budget tourists has helped limit the number of inbound tourists which have helped maintain the **sustainable tourism ecosystem**
- **Generated self-employment**, helped uplift the rural community which are predominantly agrarian, through generation of additional income (selling of hand-made produce such as handicrafts, alternate means of livelihood as tour guides, pony porter services cultural performance among others)

Success Factors	
Improving Accessibility	• Tourism Council of Bhutan along with the national airline, Drukair has taken steps to increase the frequency of flights, improve connectivity, fleet of aircrafts. • It further plans to build additional airports to meet increasing demand
Overcome Seasonality	• The Tourism Council of Bhutan is working with hotel and tour operators to promote Bhutan as a year-round destination to avoid impact of seasonality • Flexible pricing has been adopted to arrive at facility prices based on demand in that period
Diversify Offerings	• Cultural tourism is the most preferred theme in Bhutan. Of the arrivals of tourists, cultural tourism emerges as the most preferred theme (~ 88%) followed by nature (7%), adventure tourism (4%), spiritual and wellness (1%) [29] • The Tourism Council is taking proactive steps in promoting eco-tourism, adventure tourism and nature based tourism.
Collaboration with Private Sector	• The Tourism Council works in close cooperation with the Hotel Association of Bhutan, Association of Bhutanese Tour Operators and the Guide Association of Bhutan to establish a channel for closer and more effective collaboration between the tourism industry and the Department of Tourism: – Currently there are over 1,000 licensed and active tour guides in Bhutan who are trained. Guides are trained to specialize in either cultural or adventure tours. Many guides complete language courses in German, Japanese, Thai and other languages so that they can easily communicate with guests and all are proficient in English. – There are over 100 Tour Operators who are mandated to employ only registered and certified guides. – New luxury hotels, upgrading of existing hotels and foreign direct investment are encouraged through tax and fiscal incentives
Customer Satisfaction	• Tourism Council has published Accommodation Classification Standards 2016-2020 in order to bring standardisation and gradation of services offered by the operators

Way Forward

Areas	Key Recommendations	
	Public Sector	**Private Sector**
Connectivity	**Air:** • There are around 19 airports in the region with a mix of international, civil enclaves, and domestic airports of which some are operational and some are non-operational. Only 2 International airport of these airports [30] • Efforts should be made to develop airports, particularly in state capitals to international standards • Efforts should be made to convert the non-operational airports to operational by developing trade routes • Policies should be framed in order to incentivize private players to operate on these routes through airports in North East **Rail:** • The railways network across the north eastern states is ~2600 km with broad gauge limited majorly to Assam[31] • The Northeast Frontier Railway zone has received a push from the government to develop connectivity across the states within 2020. • Focus should be to complete the ongoing projects on time and develop other routes to develop inter-state connectivity • Explore opportunities to establish link with neighbouring countries in line with Kolkata-Dhaka train linkage **Road:** • Developing interstate connectivity and International corridors such as the BBIN • Explore possibilities of constructing Trans-Highways such as the Trans-Arunachal Highway to reduce travel time • Define policies for establishing radio-cabs and internet based cab services in the region	**Air:** • Shaping of travel policies along with Government and other stakeholders. • Private players can look to invest in developing of airports similar to airports in other states such as Maharashtra, Delhi etc. • Flight operators can look to leverage on the Regional Connectivity Scheme; key features of which may be highlighted as : – Code sharing arrangements – Concession on Service Tax on tickets – Provision of utility services at substantially concessional rates – Exception of Landing Charges and Parking Charges – Discounted Route Navigation and Facilitation Charges (RNFC) **Rail:** • Private players may look to explore the possibility of developing, operating and maintaining railway stations **Road:** • Private players, particularly bus operators, cab operators etc. can look to establish new routes and provide quality services to tourists • Establish/invest in developing of radio-cab industry in the region

Areas	Key Recommendations	
	Public Sector	**Private Sector**
Marketing and Promotion	• Create a tourism promotion cell for the region • Develop a unified marketing strategy • Engage various stakeholders such as Hotels/ Restaurants, Internet Service Providers, Cab service providers, Tour operators etc. for policy and brand building for the region	• Partner with Tourism Promotion Cell to develop and provide inputs on marketing strategy
Development and Restoration of Tourist Destinations	• Identify new tourist spots and provide facilities to various stakeholders and operators to develop tourism • Restore old tourist spots and identify spots/sites that can be accredited by world bodies such as UNESCO • Increase outlay in budget for above activities	• Identify tourism destinations/circuits etc. in collaboration with state governments • Invest in development and promotion of such places
Hotels & Accommodations	• Explore possibility to create land bank for public and private investments for construction of accommodation facilities, in lines with other state government policies • Define proper land acquisition policies for private sector investments • Provide incentives and breaks in form of waiving off stamp duties, registration fees etc. for acquiring land, development of properties to be used for tourism • Identify regions that can be promoted as heritage tourism and develop them for accreditation by UNESCO • Outline proper policies for creation of home homestays, Bed'n'Breakfast facilities to attract tourists	• Invest in construction of hotels near UNESCO heritage sites such as **Kaziranga National Park, Manas National Park** etc. by leveraging on the tax incentives provided. • Improve overall facilities being offered at the hotels and standardize them in lines with facilities offered in other states
Travel trade services	• Outline guidelines for operations of travel trade service providers • Identify service partners in neighbouring states/ countries to showcase tourism potential of North East	• Explore the opportunity to enter into partnerships/joint ventures with tourism service providers from neighbouring regions to promote tourism in North East such as GTO-Alliance etc.
Skill Development	• Formulate policies for skill development in the tourism and allied sector • Set up skill development institutes, training courses , certification courses • Formulate policies to attract investments by private players in setting up skill development institutes	• Identify sectors and regions for setting up of skilling institutes • Invest in providing world class skill development programmes to attract more people • Tie up with local ITIs, colleges and institutes to promote the importance of skilling and job creation

Areas	Key Recommendations	
	Public Sector	**Private Sector**
Leveraging ICT	• Provide facilities such as video monitoring, remote monitoring and distress helplines to improve daily operations, reduce crime rate and provide control systems to authorities. • Partner with various online platforms to leverage and promote products in order to attract more tourists and better utilize resources, such as providing off-season discounts, target niche tourist segments for cultural, religious and adventure tourists etc. and provide help in planning tours by connecting them with tour operators • Online platforms can also be leveraged to generate customer feedbacks and offer better quality products and services in the future for promoting and generating higher revenues	• Provide internet facilities to remote locations by setting up operations. Currently, number of broadband connection provided under Universal Service Obligation Funds (USOFs) Rural are ~2.3% of all India level[32] • Provide services in setting up security systems for better monitoring and control • Partner with public stakeholder (Governments/ Tourism Cell) to develop products for attracting tourists in the region. • Incorporate feedbacks from government as well as tourists and offer better quality products and services • Focus on increasing mobile connectivity with internet service penetration across the region, particularly in the hills. There are only ~1.2% of house hold with internet connection compared to India average of ~3.1%.[33] • Leverage ICT technology to provide Point-of Sales Card Swiping machines at remote locations for ease of payment
Tea Tourism	• Identify tea estates by area which can be utilized for promotion of tea tourism across the region • Draft policies/guidelines for development and promotion of tea tourism in line with states such as West Bengal. Some key features of the guidelines are: – **Land:** No land under actual tea plantation to be used for tea tourism and area under tea cultivation not to be reduced – **Accommodation:** Bungalows and houses may be used for temporary accommodation of tourists	• Shape tea tourism guidelines in collaboration with Government bodies • Develop infrastructure to promote tea tourism in individual tea garden • Explore possibility of setting up joint ventures with hospitality partners to leverage on existing facilities of the participants to provide better service and holistic experience to tourists



Healthcare

Overview of the healthcare sector in India

Healthcare is one of the key sectors which need focus from the Government as well as the private sector in India. In spite of economic and social development, the healthcare infrastructure in the country is way below the global standards. As far as healthcare spending is concerned, India lags behind the global average.

Healthcare spend in India as a percent of total GDP stands at 3.8% as compared to the global average of 8.6% [34]. Even the per capita expenditure on healthcare in India is way below the global average.

The low spend on healthcare in India has resulted in poor performance in infrastructure metrics when compared to global standards.

Snapshot of India's relative position in major infrastructure indicators

Indicators (per 10000 people)	India	Brazil	Russia	China	United States
Beds[35]	0.5 (2014)		8.8 (2014)	3.6 (2014)	2.8 (2014)
Doctors[36]	0.725 (2014)	1.89 (2013)	3.3 (2014)	1.94 (2012)	2.55 (2013)
Nurses[37]	1.7 (2014)	7.6 (2013)	8.52 (2010)	1.85 (2012)	9.8 (2005)

Source: WHO, OECD, World Bank

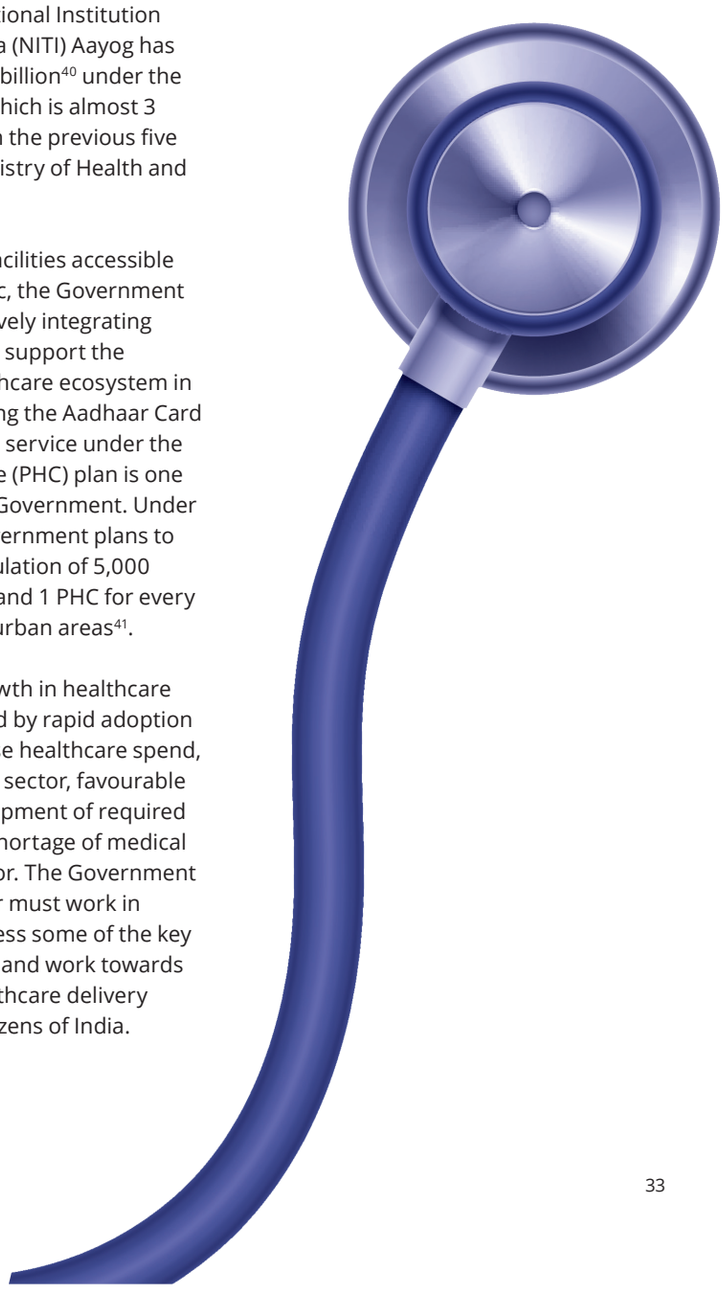
Even though the public sector spending has been significantly low, the private healthcare sector in India has grown significantly accounting for around 70% of the country's total healthcare expenditure. Large investments by private sector players are likely to contribute significantly to the development of the sector which is poised to reach $280 billion by 2020, witnessing a compounded annual growth rate (CAGR) of 22.9 per cent during 2015-20. This can be attributed to various factors such as shift from communicable diseases to lifestyle disease (cardio-vascular diseases), penetration of insurance products etc.[38]

Even though the public sector spending has been significantly low, the private healthcare sector in India has grown significantly accounting for around 70% of the country's total healthcare expenditure. Private Investments may contribute significantly to the development of the healthcare sector which is projected to grow at a compounded annual growth rate (CAGR) of ~ 22.9 per cent during 2015-20 and touch around ~ $280 billion by 2020[39]. This can be attributed to various factors such as shift from communicable diseases to lifestyle disease (cardiovascular diseases), penetration of insurance products etc.

The public sector has also taken strategic initiatives and put its focus for development of the healthcare sector in India. Taking cues from some of the countries globally which have advanced healthcare systems, the Government of India in the 12th five-year plan (2012-17) has focused on providing universal healthcare, and also increased allocations for strengthening the existing healthcare infrastructure in the country and promoting research and development in the sector. The National Institution for Transforming India (NITI) Aayog has allocated around $55 billion[40] under the 12th Five-Year Plan (which is almost 3 times the allocation in the previous five - year Plan) to the Ministry of Health and Family Welfare.

To make healthcare facilities accessible and available to public, the Government of India has been actively integrating various legislations to support the evolution of the healthcare ecosystem in the country. Leveraging the Aadhaar Card to provide Healthcare service under the Primary Health Centre (PHC) plan is one such initiative by the Government. Under the PHC Plan, the Government plans to have 1 PHC for a population of 5,000 people in rural areas and 1 PHC for every 10,000 people in the urban areas[41].

The next stage of growth in healthcare services will be fuelled by rapid adoption of technology, increase healthcare spend, capital inflow into the sector, favourable legislation and development of required skills to address the shortage of medical personnel in the sector. The Government and the private sector must work in collaboration to address some of the key issues in the industry and work towards building a better healthcare delivery ecosystem for the citizens of India.



Healthcare Delivery Landscape in India

The ecosystem of Healthcare sector in India includes Hospitals, Pharmaceutical companies, Standalone Pharmacies, Medical Insurance, Retail Healthcare, Medical Tourism, and Telemedicine. While the retail healthcare formats like that of primary healthcare centres, day care and short stay surgery centres and home healthcare are gaining significance in recent years, hospitals still remain the predominant outpost for the delivery of healthcare services in India.

The overall healthcare landscape spans across products – namely pharmaceuticals, medicines, medical equipment and devices, and services– namely delivery of healthcare through diagnostics and treatment. Healthcare delivery essentially covers the services provided to consumers (patients in this case) through the entire lifecycle– preventive (also referred to as 'wellness'), curative (diagnostics, primary care, secondary care, and tertiary care provided at hospitals or health centres, for both chronic and acute health issues), and recuperative (home healthcare including nutrition, physiotherapy, post-op care).

Indian healthcare sector became the fifth largest employer, both in terms of direct as well as indirect employment with total direct employment of 4.7 million people in 2015[42]. Healthcare delivery constitutes 65% of the overall Indian healthcare market.

India's healthcare delivery landscape has historically been dominated by government hospitals, one-off hospitals or nursing homes (owned and run either by charitable trusts, or self-owned by doctor-promoters). It is only in the last two decades that India has seen a surge of large healthcare players, often corporate houses, enter the healthcare delivery space and setup large, tertiary/ quaternary care hospitals which compare with world class hospitals in other parts of the globe. Overall, the healthcare delivery market still remains very fragmented, with the 5 largest hospital players together covering around 35,000 beds, which is 1% of the total hospital beds in India[43].

Within hospitals, the private sector accounts for a majority of the total healthcare expenditure in India. In India, the public health expenditure as a



percent of total health expenditure has been increasing over the last few years. This expenditure increased from 27% in 2011 to 30% by 2014[44].

Key Issues

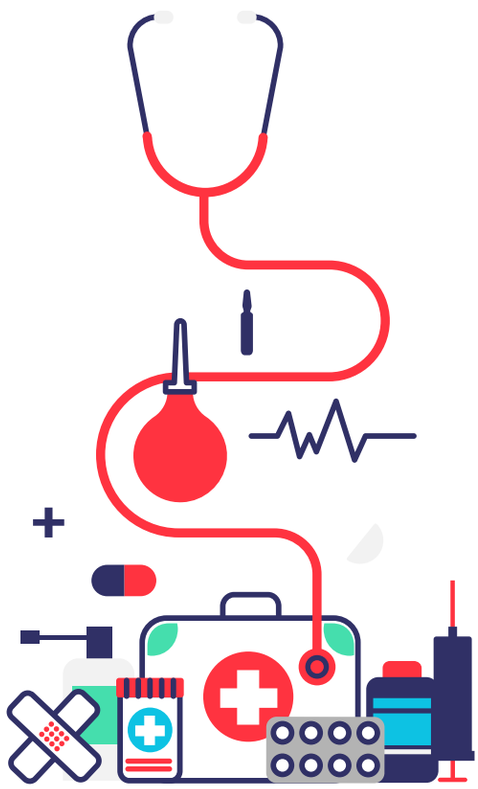
Population growth, demographics & rising per capita income

Nearly 8 per cent of the Indian population was above the age of 60 years in 2011. This proportion is expected to climb to 12.5 per cent by 2026[45]. Given this, India is faced with the dual challenge of making good the current deficiency in healthcare infrastructure as well as in planning for future requirements. While it is considered to be a country with a large proportion of population below the age of 30, the country will have a significant population of middle-aged persons leading to a corresponding increase in demand for healthcare delivery systems and services. The per capita income in India has grown by 60% from $797 in 2006 to $1,262 in 2014[46] and is expected to rise further with a growing younger population. The increase in working population may lead to greater occurrence of lifestyle diseases which shall require more advanced treatment and spent in healthcare.

Gap in Health Infrastructure between urban and rural areas

The per capita income is higher in the urban cities as compared to the rural areas and supported with a better infrastructure, the concentration of private healthcare service providers has been largely towards urban areas. These areas are now home to a wide variety of healthcare facilities offering single specialty, multi-specialty, primary care, quaternary care along with personalised value added services. On the other hand a historically low public spend, lack of infrastructure, and the focus of private players on urban areas has left rural India far behind in the healthcare space. Thus there is a vast disparity in offerings between the metros and urban centres vis-a-vis the semi-urban and rural areas in the country.

Even though India has been trying to increase spend on healthcare there has been significant disparity in the spending patterns amongst the states. **Accessibility** and **affordability** of healthcare services are among the major healthcare challenges faced by states with lower per capita income. Since majority of the household spend more than 40% of their household income on **Out of Pocket Expenses (OOPE)** in healthcare and owing to low penetration of insurance products and inadequate public spending on healthcare, there is an urgent need to address these issues.



Categorization of all Indian states by mean OOPE[47]

Category	Mean OOPE per capita (INR)	States	Number of households (%)
A	100 or more	Punjab, Chandigarh, Maharashtra, Goa, Kerala, Pondicherry	**16,887 (16.74)**
B	50 to 99	Karnataka, Delhi, Madhya Pradesh, Rajasthan, J&K, Andaman and Nicobar, Uttar Pradesh, **Tripura**, West Bengal, Andhra Pradesh, Gujarat, Uttarakhand, Lakshadweep, Haryana, Tamil Nadu, Himachal Pradesh	**57,829 (57.34)**
C	Below 50	Dadra Nagar Haveli, **Sikkim, Nagaland, Assam, Manipur,** Daman &Diu, **Meghalaya, Mizoram,** Bihar, Jharkhand, Chhattisgarh, Orissa, **Arunachal Pradesh**	**26,139 (25.92)**

Source: https://equityhealthj.biomedcentral.com
The average OOPE per capita across all states in India is INR 68.

Healthcare Services in North East India

North East not only has a sizeable population which is under served/ treated, but also there is potential to attract a significant share of foreign tourists from neighbouring countries such as Bangladesh, Bhutan, Nepal, Myanmar who come to other parts of India for quality and affordable treatment. Spend in healthcare in North East has been 2% of the GSDP[48], as of 2014-15 and it has primarily been driven by the public sector. The trend in public spend on healthcare has not even kept pace with the demands of the growing population.

A number of leading private healthcare providers have entered the North East in the recent past, with the first ever FDI in healthcare for the region coming in the form of Rs. 90 Cr investment for a super specialty hospital by Netherlands based Ayursundara in 2017[49].

Region	Public Expenditure on Health (INR Cr.)[50]	GSDP[51]
	2014-15	**2014-15**
Arunachal Pradesh	671	13,54,080
Assam	3,626	166,70,884
Manipur	625	15,03,029
Meghalaya	645	21,15,183
Mizoram	536	9,63,364
Nagaland	498	14,11,536
Tripura	853	12,88,249
Sikkim	361	25,08,632

Source: http://niti.gov.in/state-statistics

Many pan India private players like Apollo and Narayana Hrudalaya have come up in the North East and have tried to fill in the void in the healthcare systems with improved quality of services. Some regional hospitals have also come up in the region like Shija Hospital in Imphal which is catering not only to the people in the Manipur but also adjoining countries like Myanmar.

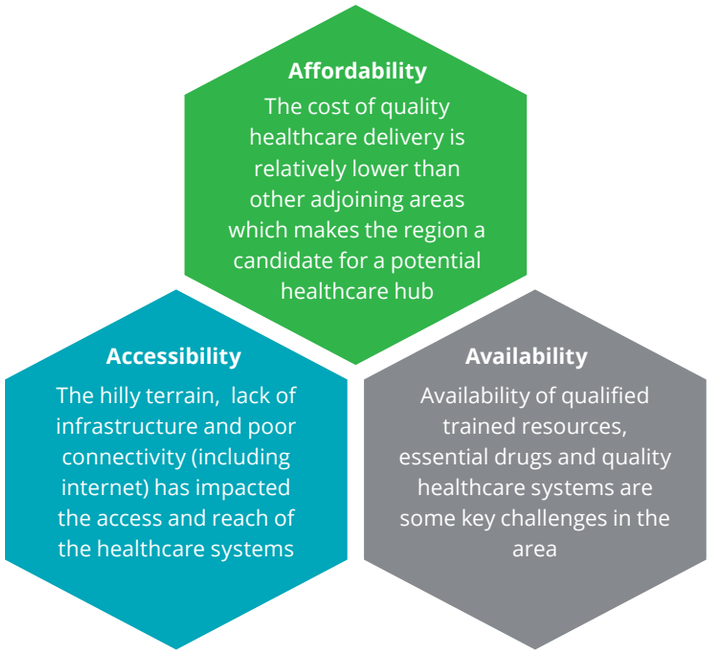
Key Issues in North East

The issues in the north-east for developing the value chain for healthcare can be broadly analysed along the dimensions of affordability, accessibility, and availability[52].

Affordability: Given the lower costs of treatment in this region, many residents from South East Asia, particularly Myanmar are travelling to Manipur for treatment.

Accessibility: The hilly terrain of North East renders many places inaccessible which makes it difficult for the population living in far-off places to reach and avail medical facilities on time.

Availability: The region has 13% of the total medical colleges in India producing only 12% of qualified doctors in the country.[53] Facilities are adequate in the urban areas where as rural areas lack penetration of medical facilities. With investments coming into the sector **quality facilities** are being made available to accommodate the patients along with support systems



Though there are a **few** NABL and NABH Accredited hospitals available in the state, it still needs active participation from the professionals in public and private sector players to achieve the status of a healthcare hub. Acceptance for traditional medical facilities (Ayurveda, Yoga, Unani, etc.) needs to be focussed upon as alternate healthcare delivery channels.

Lack of Manpower & Infrastructure

- Overall, though primary health centres across the NER have increased at a greater pace than the national average, community health centres and sub-centres have not kept pace. Assam is the only state which has seen significant rise in both PHCs and CHCs

Number of Sub-centers, Primary Health Centers (PHCs) and Community Health Centers (CHCs)[54]

	2005			2015			No(s) per Lakh people		
State	**Sub-centres**	**PHCs**	**CHCs**	**Sub-centres**	**PHCs**	**CHCs**	**Sub-Centre (SC)**	**PHCs**	**CHCs**
Arunachal Pradesh	379	85	31	286	117	52	19	8	3
Assam	5,109	610	100	4,621	1,014	151	14	3	0
Manipur	420	72	16	421	85	17	15	3	1
Meghalaya	401	101	24	428	110	27	13	3	1
Mizoram	366	57	9	370	57	9	31	5	1
Nagaland	394	87	21	396	128	21	20	6	1
Tripura	539	73	10	1,017	91	20	26	2	1
Sikkim	147	24	4	147	24	2	23	4	0
All India	**1,46,026**	**23,236**	**3,346**	**1,53,655**	**25,308**	**5,396**	**12**	**2**	**0.4**

Source: http://niti.gov.in/state-statistics

- Besides Assam, states like Manipur & Nagaland has seen a significant rise in the number of doctors in PHCs while Arunachal Pradesh, Sikkim and Tripura have seen a sharp rise in pharmacists over the years[55]. Manipur has become a prominent state in producing a large number of nursing staff who have not only remained in the state but also spread out to entire India.

State	Doctors in Position at Primary Health Centers			Pharmacists in Position at PHCs			Nursing Staff in Position at PHCs		
	2005	**2015**	**CAGR**	**2005**	**2015**	**CAGR**	**2005**	**2015**	**CAGR**
Arunachal Pradesh	78	102	3%	32	97	12%	105	319	12%
Assam	NA	1,355	NA	NA	1,347	NA	NA	3,056	NA
Manipur	67	199	12%	88	146	5%	62	433	21%
Meghalaya	123	114	-1%	121	135	1%	263	413	5%
Mizoram	57	49	-2%	35	46	3%	122	224	6%
Nagaland	53	133	10%	85	101	2%	520	378	-3%
Tripura	152	158		63	131	8%	274	421	4%
Sikkim	48	29		3	14	17%	45	41	-1%
All India	**20,308**	**27,421**		**17,708**	**23,131**	**3%**	**28,930**	**65,039**	**8%**

Source: Rural Health Statistics, 2014-15

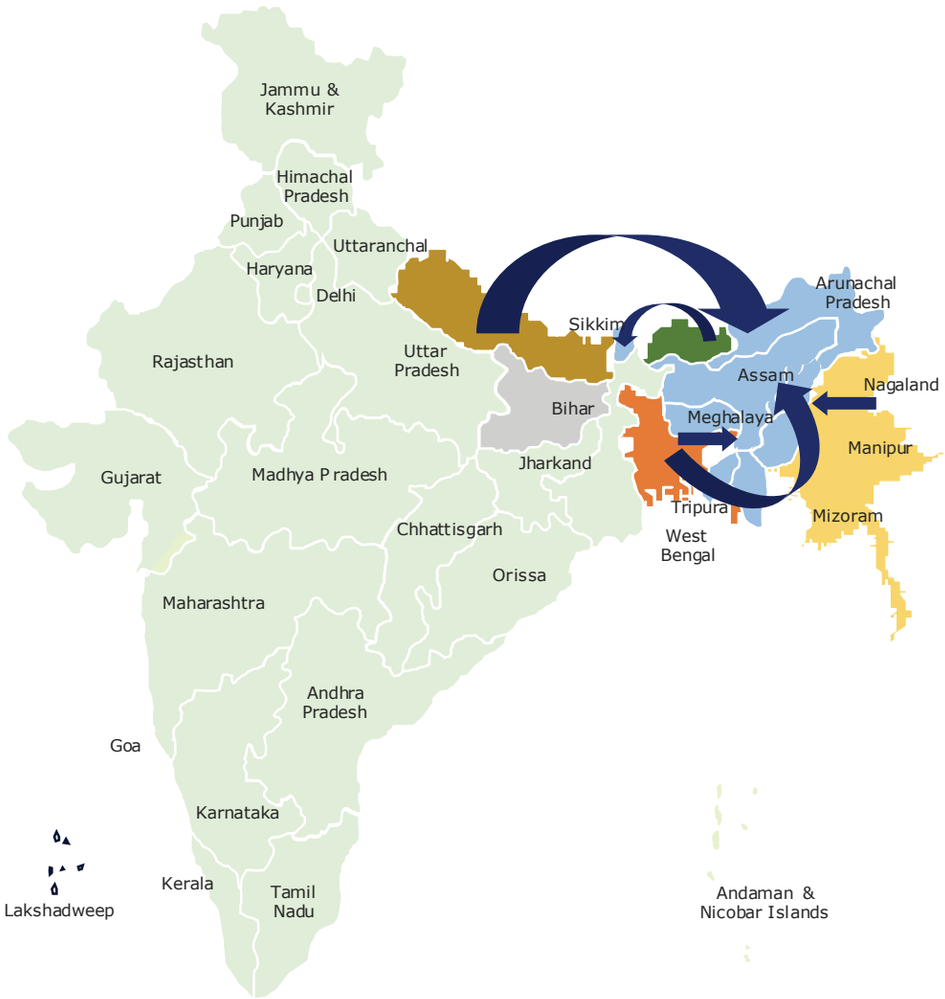
Potential for North East as a healthcare hub

North East is ideally positioned to attract medical tourists from South and South East Asian countries. With low cost medical treatment available, lower labour costs, easier transport by road and air, it can be poised as a medical hub for the country.

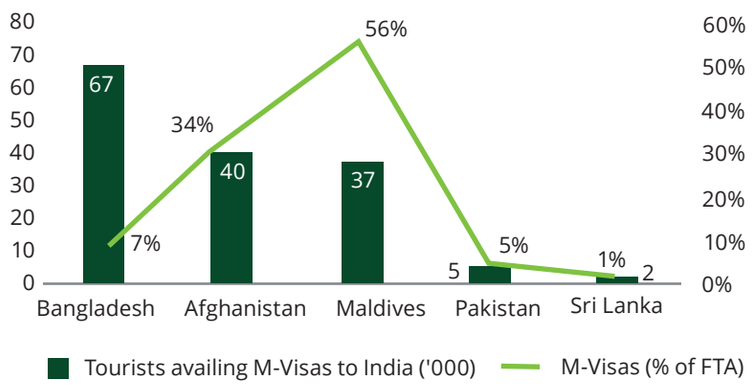
Routes can be developed to attract tourists from Bhutan, Nepal, Bangladesh, Myanmar and other South and South East Asian countries to link with various North East states.

The Government can also look towards easing the entry barriers for people willing to come to India through the borders for accessing the healthcare system in India. A case in point is the Shija Hospitals[56] in Manipur where a lot of people from Myanmar come to avail quality healthcare services. However the entry route at Moreh has certain strict entry procedures which the can be eased to allow patients access to similar hospitals.

India has established itself as a leading destination for quality healthcare for patients coming from the nearby countries. The maximum number of people availing the medical visas option comes from Bangladesh, while a lot of people coming from Maldives and Afghanistan travel to India solely for Medical facilities.



Medical Visa to India from different countries Source: Medical Value Travel Report 2014, FICCI



With improved connectivity, better healthcare infrastructure and presence of qualified and trained doctors and nurses, the region holds good potential of becoming the healthcare hub of the region.

Success Stories

Case Study: Thailand

Health and medical care in Thailand is predominantly state driven and overseen by the Ministry of Public Health (MOPH), along with several other non-ministerial government agencies, with total national expenditures on health amounting to 4.3 percent of GDP in 2009. The country has achieved many of the Millennium Development Goals (MDG) and over the last decade has made remarkable progress which is reflected in a high human development index (HDI) score (~0.726 in 2015)[57].

Thailand has a robust primary health care, innovative health system development and a progressive health promotion programme which has resulted in higher life expectancy of the population (~ 70 years). Universal health care (UHC) for Thai citizens, introduced in 2002, extended the scope of coverage to 18 million people who were uninsured and to a further 29 million who were previously covered by less comprehensive schemes. Since UHC introduction, OOPE have fallen dramatically.

With its capacity in policy analysis and active participation in global health fora, including WHO's World Health Assembly, multilateral platforms and other regional and global institutions, Thailand holds significant influence on global health policy and programmes – including on trade and health negotiations, where middle and low-income countries are not well represented.

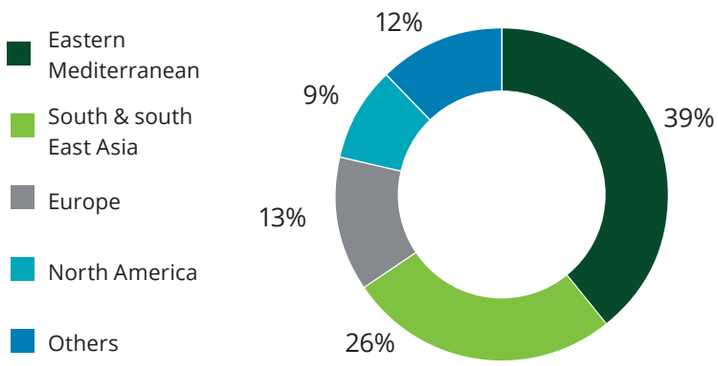
Indicators	2000	Latest Statistics	Year	CAGR
Fertility rate (births per woman)	1.82	1.6	2016	-1%
Infant mortality /1000 live births	25	6.4	2013	-10%
Total health expenditure (THE) as proportion of GDP (%)	3.4	6.5	2014	5%
Public expenditure as a proportion of Total Health Expenditure	56%	86%	2014	3%

Source: Country Cooperation Statistics, Thailand, 2017-2021, WHO

Success for healthcare industry in Thailand can be analysed from two broad dimensions.

Sound Health Indicators for Thai Citizens - As indicated in the above table, the robust policy of the country has led to an improvement in health indicators with infant mortality reducing at ~10% over the last decade.

Top 4 regions contribute to approximately 90%of medical tourists to Thailand



Source: http://www.who.int/bulletin/volumes/94/1/BLT-14-152165-table-T1.html

Emergence of Medical Tourism and its growing popularity - There are a number of reasons why Thailand has been such a success story in medical tourism. These reasons include **state of the art facilities, affordable prices** and **quality services**. The number of patients from foreign countries is on the rise not only because of low-cost medical services but also because of **excellent tourism infrastructure**. This has given a significant boost to the **post-treatment** (recovery) market in Thailand.

Another critical reason which has led to the growth of the healthcare sector (for foreign patients) in Thailand is the **availability of hospitals**. Currently Thailand has around 30+ JCI accredited hospitals providing quality services at affordable rates.

Accessibility is another factor which has played an instrumental role in making Thailand a preferred destination for medical tourism. The country is particularly popular among travellers from North America, Europe and Myanmar for whom Thailand is easily accessible. Several airlines from UK run flights to Thailand making the medical treatment cost effective.

Thailand's medical tourism also seems to benefit from its proximity to emerging Asian economies such as Vietnam, Cambodia, Myanmar and Laos.

Case Study: Tamil Nadu
The state boasts of being the number one destination attracting foreign tourists in India for the last few years. Apart from being home to 5 UNESCO sites, the state has a world class healthcare infrastructure which attracts a lot of medical tourists annually. Medical tourism business growing sector in India expected to grow at 22-25% annually.

Chennai leads the Indian States in medical tourism; it's called the "Health Capital" of India

- Currently it attract around ~ 45% of the total foreign tourists who arrive in India for medical reasons (on an average the city receives around 200 foreign patients on a daily basis)[58]
- Around 40% of domestic patients from other states come to Chennai
- Of the total 12,000 beds (approx.) in Tamil Nadu, around half of it occupied by patients domiciled in the state while the rest occupied by patients from other states and those coming from abroad
- Most foreign tourists come from Middle east, Africa, South and South- East Asia

The spectacular success of Tamil Nadu in establishing itself as a medical hub can be attributed to the following:

Affordability – Quality healthcare at affordable prices is one of the key reason for attracting people from within Indian subcontinent as well as developed countries to India for performing complex surgeries. While people from South & South East Asia and Middle East mainly come for surgeries at affordable rates, people from the developed countries normally come to India for cosmetic surgeries which are not covered as part of their packages in the West.

Accessibility – Tamil Nadu is strategically located and easily accessible from Middle East and South / South East Asian countries through air. A significant number of tourists also avail the **medical visas and e-tourist** visas permitted by the Indian Government to travel to India for availing the medical facilities as well as the traditional Indian practices like Ayurveda.

Availability – The State produces the maximum number of qualified doctors, paramedical staff. Adequate **quality facilities** are available to accommodate the patients along with support systems. Even linguistic interpreters are available for a smooth stay during the visit. The state also boasts of other traditional Indian healthcare practices[59] (Yoga, Ayurveda etc.) which attracts a lot of tourists willing to experience the wellness sector in India. Availability of JCI accredited hospitals, Translators, favourable ecosystem enabled by technology and active participation from the professionals in the private sector

An overall holistic ecosystem in Tamil Nadu, enabled by favourable government policies and proactive private participation has resulted in Tamil Nadu being one of the preferred medical destination in India globally.

Key Factors

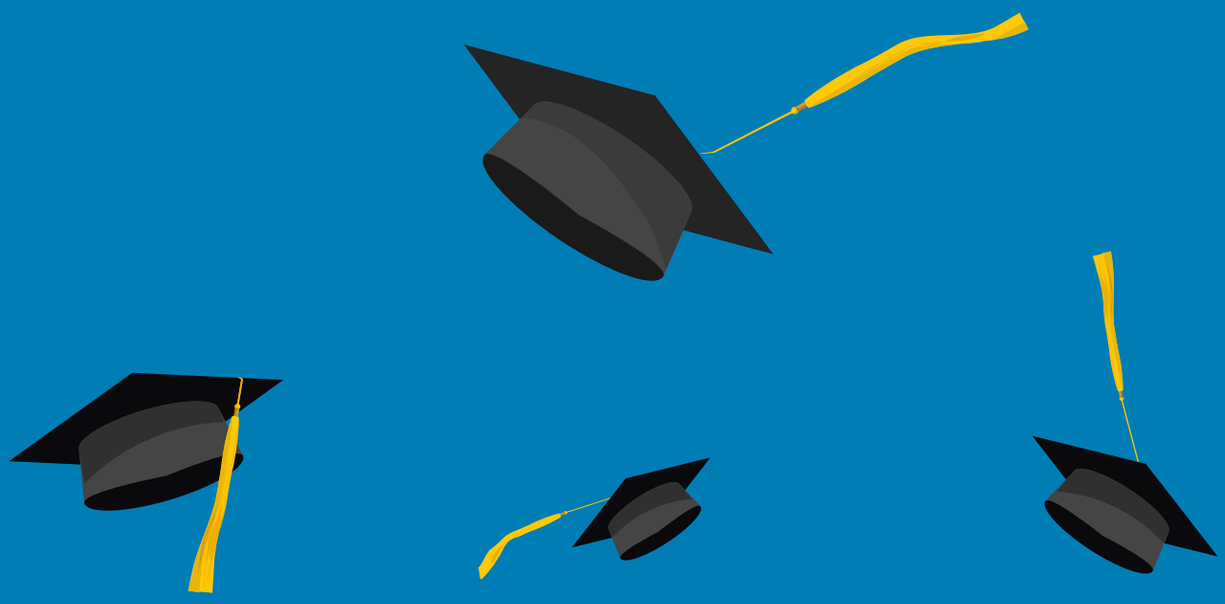
- Hospitals tying up with budget hotels/ serviced apartments , provision of a comprehensive health package
- Tour Operators providing integrated package ranging from hospital selection, travel and accommodation
- Post Treatment (recovery phase) is another focus area and Tamil Nadu enjoys the strategic location advantage as a preferred tourism destination in India
- Many private hospitals tying up with Government organisations (from leading countries which send maximum foreign tourists on medical grounds) to send their employees on customised packages.

Way Forward

The impediments prevalent towards development of healthcare sector in North East India present an opportunity to the private sector to identify and address these gaps along with a favourable policy and support from the Government. The key action points for these stakeholders are tabulated below:

Areas	Key Themes	Action points	Responsibilities of Major Stakeholders
Affordability	Healthcare Infrastructure providing quality services at affordable rates	• **Development of more PHCs** with adequate doctors and nurses would largely improve the lives of people in the region • **Maintenance /Upgradation** of existing facilities • Identification of regions with low penetration and development of new facilities in these regions	**Government** – Adequate funding needs to be provided to build infrastructure like hospitals, PHCs, diagnostic chains and medical colleges which can be easily afforded by the people in the region **Industry** – Can look forward to develop hospitals, diagnostic chains etc. under their CSR programs **Collaboration** – Infrastructure can also be developed in PPP mode and run by local NGOs in areas where availability of manpower is an issue
	Social Security	• Increase the **adoption of health insurance** products among the common people which would provide the option of 70-80% co-payment options for treatment in most public and private healthcare institutions • Introduction of a medical saving component in provident fund account, similar to that adopted in Singapore[60]	**Government** –Promote the use of health insurance as an affordable mechanism to avail quality healthcare services **Industry** – Employees in public sector units, can avail affordable healthcare under Government Health Schemes. Corporate tie ups with healthcare facilities can lead to lowering the cost of healthcare services for the people employed in private sector
Accessibility	Use of ICT to increase reach of healthcare	• Can provide last mile connectivity to patients and **virtual medical assistance** to patients in remote area from doctors who can provide consulting from centrally located hospitals. • The **use of mobiles** for accessing health-related information or consuming health services will be a reality, coupled with wearables for tracking health metrics. • Use of Data Analytics and **Electronic medical records** (EMR) will open up a new trend of data analytics for predictive analysis.	**Industry** – Can engage in pursuing these emerging uses of ICT as viable business models. Many private hospitals are increasingly using EMR to keep track of their patients data and the practice is going to grow in the near future **Collaboration** The Government can collaborate with the industry to introduce such technology and innovations in the public hospitals Innovation labs can be set up in collaboration to research on increasing use of ICT in the remote areas of North East

Areas	Key Themes	Action points	Responsibilities of Major Stakeholders
	Policy Issues	• **Provide access to the patients from neighboring countries** to access the health care facilities in India with respect to ease of accessing visas and relaxation of entry exit via road in certain areas like Moreh • **Prioritizing the traditional healthcare systems** (AYUSH) in the North Eastern states along with gradual focus on developing super specialty healthcare systems in NER • **Attracting private investments** in the North East, by providing business incentives in the form of financial assistance, tax subsidies, ease of obtaining land and single window clearance	**Government** • Can focus on ease of obtaining medical visas • Promote AYUSH and alternate healthcare systems in the North East **Collaboration** Various Chambers and the Government can work together to conduct road shows and investment summits to attract private investments in the healthcare in the NER
Availability	Skilled Labor	• To address the growing needs of skilled manpower, **training centers for nursing, lab technicians and pharmacists must be set up**. While Manipur has gone a long way in providing trained nurses to all over India, similar success stories needs to be created in other north eastern states as well	**Collaboration** – Both the industry as well as the Government can look forward to build • Medical Colleges for doctors • Training centers for nurses • Centers providing TVET (Technical & Vocational Education Training) to lab technicians
	Super/ Multi Specialty Medical Infrastructure	• North East states should focus on developing medical infrastructure to provide high value treatment to attract advanced patients, thereby, opening the route to generate higher revenues. Development of **Super-speciality and multi-speciality hospitals with international accreditations** likely to appeal to foreign tourists.	**Industry** – Given the huge international border the region shares, private players can look at the potential of attracting foreign tourists travelling to India for availing quality healthcare. **Government** – Promotion of the region as a medical hub after proper infrastructure is developed
	Essential Drugs	• Focus on e-pharmacy to increase the distribution reach of essential drugs • Promotion and implementation of **Jan Aushadhi** program	**Industry** – Can start pharmacy retail chains and operate e-pharmacy to distribute drugs in the region **Government** • Regulate prices of essential drugs and stronger implementation of Jan Aushadhi scheme • Promote Jan Aushadhi as a viable entrepreneurship option among the youth of the region • Reduce regulatory barriers on e-pharmacy



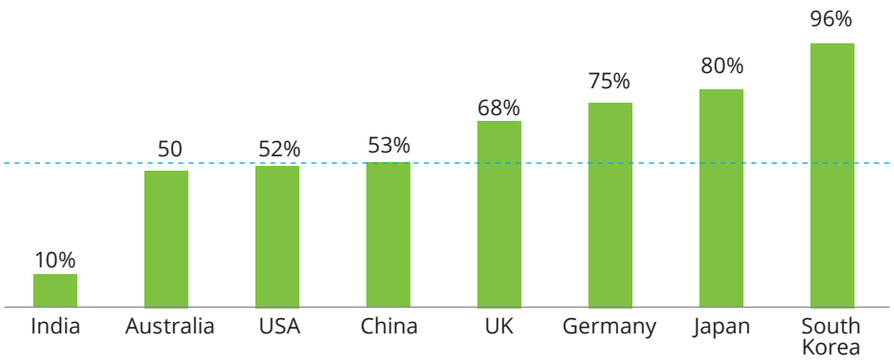
Higher Education & Skill Development

Training requirements in India
The working age population (15-54 years) in India accounts for 59% of the Indian population in 2016 and is expected to grow to 66% in 2022[61].

More than 58%[62] of employers in India find it difficult to fill their vacancies even in spite of such a high workforce availability.



Percentage of Trained workforce



Source: http://www.eife.org

India has a long way to go in terms of formally trained workforce when compared with most of the developed countries, with only 10% of the workforce being trained. Out of that, 2% receives formal training while 8% receives informal training[63]. An expected 130 million youths are expected to to join the workforce by 2022. India needs to train close to 500 million (~35% of its projected population) in the next five years to make

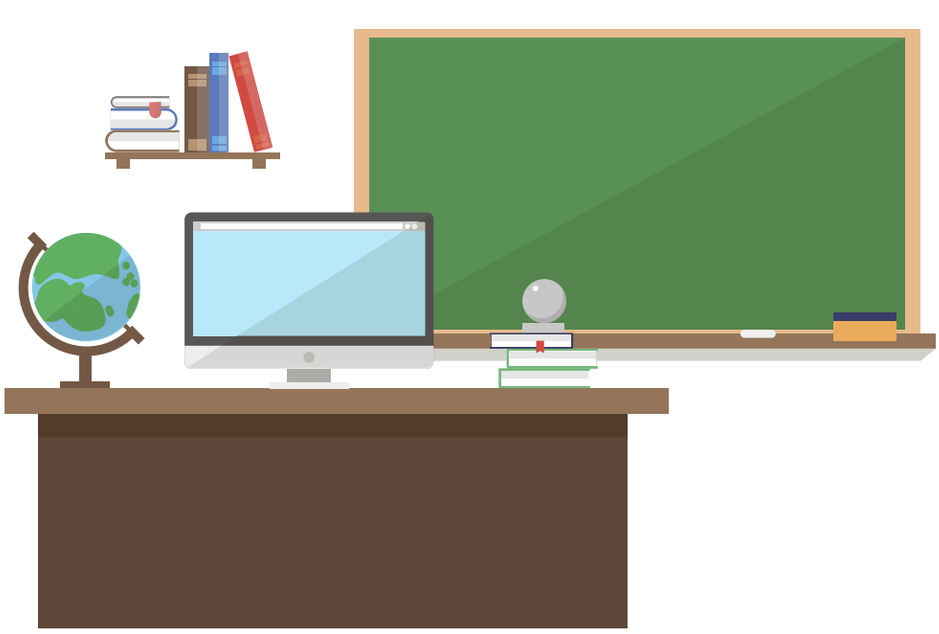
A large number of this youth needs to be trained in skillsets for industrial and manufacturing jobs as wells for jobs in the knowledge sectors

- **Tertiary Education** will prepare the workforce for jobs requiring higher skill levels, "knowledge sector"
- **Vocational training** will prepare the majority of the workforce for a large number of low and medium skill level jobs

In the section below we illustrate the skill pyramid with the different skill levels and the industries requiring them

Skills Pyramid

Given the diverse nature of skill requirements, the skill pyramid[64] captures the category of skills across industries based on several factors like education level, duration of preparation etc. Level 1 jobs require the basic skill sets which can be acquired by completing short term courses. These require minimum levels of education and can be acquired by almost anyone without any specific knowledge levels. As can be seen from the figures below, **the Level 1 and Level**

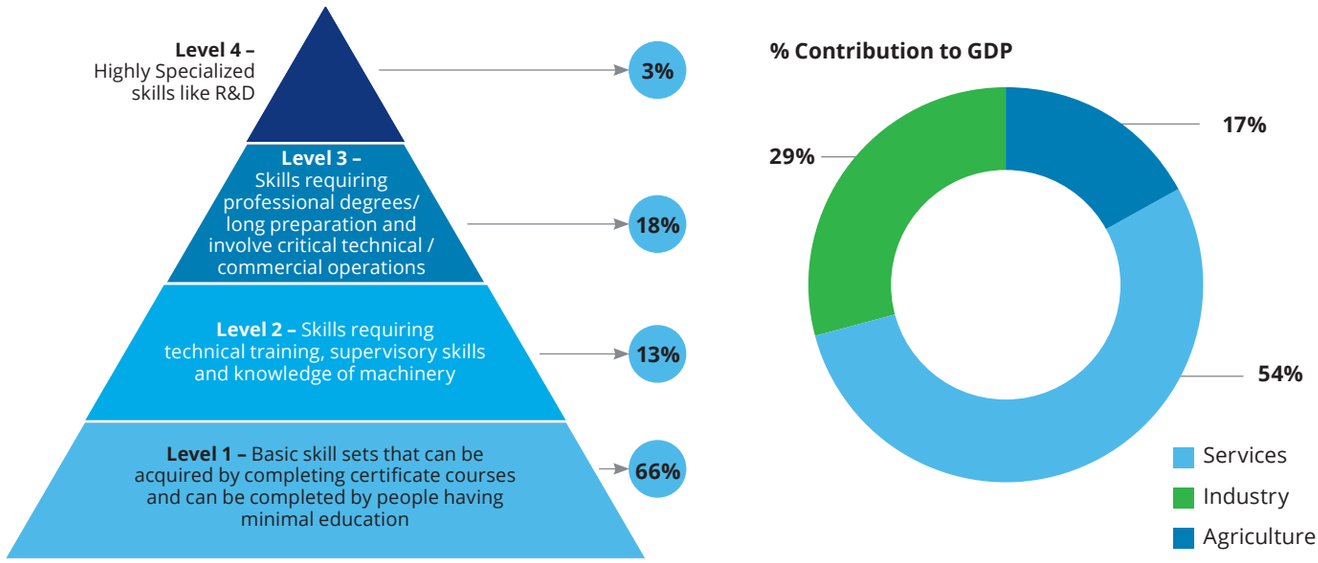




2 categories of skill will generate the major share (~79%) of employment in 2022 (as per Ministry of Skill development projection)

The Manufacturing sectors which is expected to form ~20% of the GDP by 2024[65] will also increase focus on training the workforce in machine dependent operations to improve their overall productivity. This is going to drive the majority share of the demand in level 1 and to some extent level 2 type of jobs.

On the other hand, the growing Services sector, which currently forms ~60% of our GDP[66] and which has grown by a CAGR of 10% in the last decade is expected to drive employment generation significantly in the coming years. Employment in the services sector is typically characterized by Level 2 and Level 3 jobs with a significant chunk of the workforce being employed in the ITES, Retail and Healthcare sectors[67], which will require a large number of highly trained, employable workforce. Therefore in essence it is absolutely imperative to focus on higher education and skilling initiatives to train the workforce and prepare them for future jobs.



Source: IMaCS Study

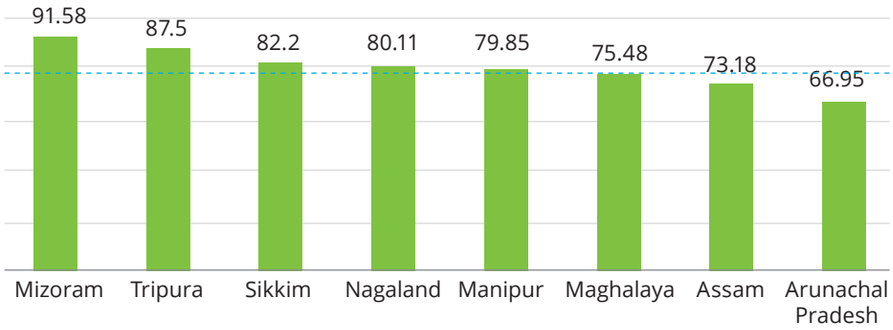
Though India has done a commendable job in primary education by reducing the rate of school dropout to 30 Lakh (2012) from 80 Lakhs in 2009[68] through the flagship Sarva Shikshya Abhiyan, a lot of work still needs to be done in improving the state of high education in India.

There is an acute shortage of infrastructure in higher education, especially in the North East and although private sector has come up to fill the void, the quality of education and the concerns of affordability remains. Secondly, the curriculum taught across most higher education institutes is not in line with modern industry trends and requirements. This has led to a situation where most students find it difficult to get employed.

Issues in the North East

The North East, like the rest of India, has made significant improvements in promoting primary education in all the NE states. This has resulted in improving the number of literates. The **Literacy rate is North East is quite high** with most of the North Eastern states being above the national average literacy rate of 78%. The North East has a **large amount of English speaking workforce**[69] which will be a key asset for tapping the services market both in India and globally.

Literacy Rate (%)



Source: Census 2011

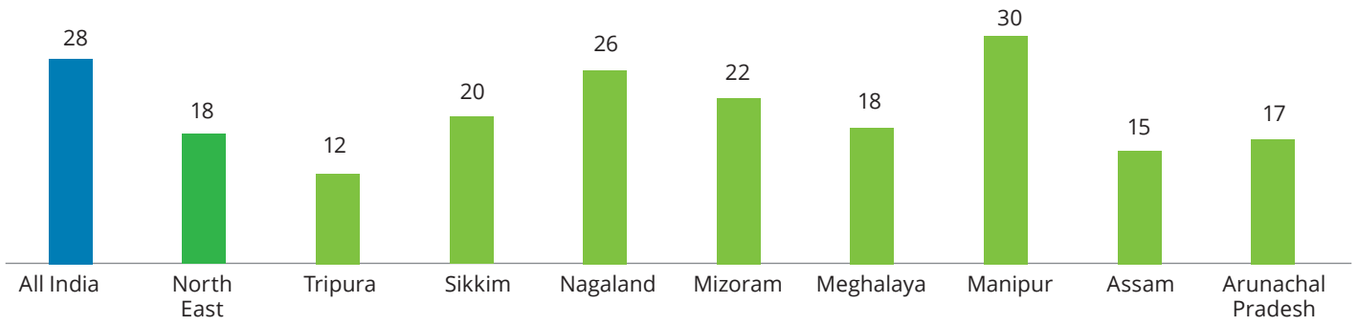
However, there is a significant gap in terms of access and quality of education which needs to be improved in order to grow this region into a potential education hub.

Access to higher education: The region suffers from major challenges in the form of lack of adequate higher education infrastructure and poor connectivity (both regional connectivity as well as digital connectivity)

a. Infrastructure

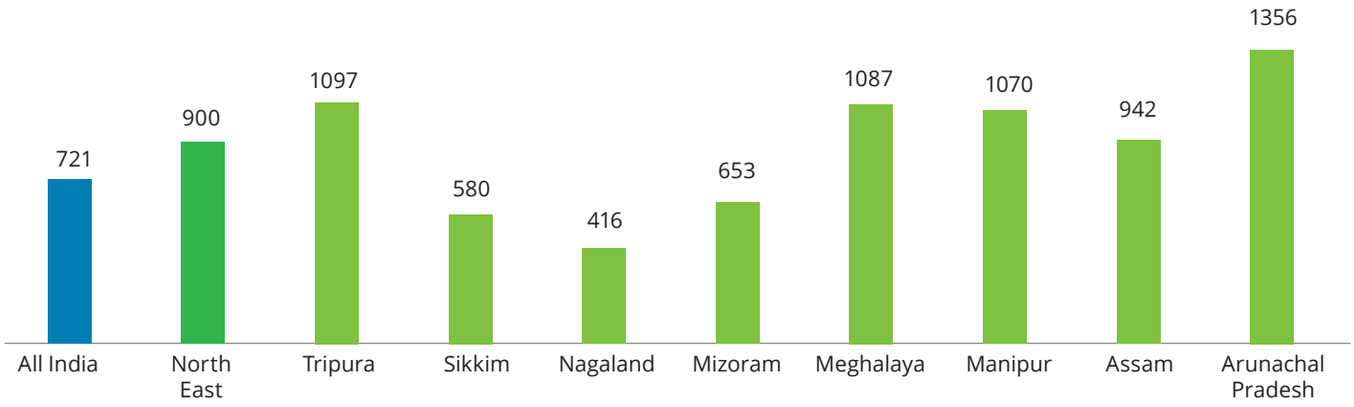
There is a considerable demand for higher education in the North East, average enrollment for colleges in most states being higher than the national

College per lakh population



Source:MHRD 2015-16

Average Enrollment per college



Source:MHRD 2015-16

average of 721 students per year. However there is a lack of adequate public and private **infrastructure** in the region, especially in the form of education institutes offering courses in secondary tertiary education and professional courses.

The **college density (colleges per lakh population)** is quite low in the region. While there are 28 colleges per lakh population on average in India[70], all the North Eastern states, barring Manipur, falls below the national average.

b. Connectivity

Connectivity challenges, as have been highlighted in the previous sections is a key area to focus on, in order to bring higher education to thousands of aspiring students who live in the remote areas and often find it difficult to travel to reputed institutions which are located in the urban areas. Added with that the difficult terrain of the region, poses a challenge in improving digital connectivity in the area.

According to Census 2011, the average number of household with Internet connections is 1.9% which falls far below the national average of 3.1%. Digital connectivity is essential to connecting people and driving trade and commerce in the region. Given the remoteness of certain areas in the region, there is a potential of improving access to education through impactful leverage of ICT based learning solutions like e-learning modules, audio-visual content available on internet, computer aided testing etc.

c. Quality of higher education

The quality of higher education imparted in most parts of India, including the north east is a critical area of concern. The major factors attributing to quality concerns include – lack of qualified teachers with adequate teaching experience, outdated curriculum not in line with current industry needs and lack of tools and techniques in providing modern education in most colleges.

i. Number of Teachers in Tertiary Education
Apart from building infrastructure, the lack of quality teachers for teaching in these institutes is also a pressing concern.

ii. Few reputed institutes with fewer specialization options to choose from
Though there has been some initiatives by the Government in building Central/ State level institutes of national importance, a lot still needs to be done in order to provide an improved quality of learning to the youth of these region

Some of the national institutions across the North East Region (NER) are listed below which have a combined capacity of more than 10,000 students which caters to to less than 0.2% of the youth population in the age group of 18-23 years in the region

There are few colleges offering specialized infrastructure in North East with only 34 universities - 23 General, 8 Technical and 2 agriculture related institutions, spread across the eight states[71]. There is very little opportunities for the students willing to pursue higher studies and go for specialized areas like Law and Medicine. Some top rated higher education institutes in NER are highlighted below.

IIT Guwahati ~ 5000 students	**IIM** Shillong ~ 120 students	**NITs** (Agartala, Silchar, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim) with intake capacity of 5000 students	**IIITs** (Assam, Manipur, Tripura) with intake capacity of 180 students



iii. Curriculum not in line with industry need

The unemployment rates in most of the North Eastern states lies above the national average of 50 per 1000 people. The problem is rather acute in states like Tripura and Sikkim which are the worst affected states. Apart from the absence of major industry belt near the region, significant part of this problem can be attributed to the fact that most of the institutes aimed at providing higher and technical education are designed in such a way that they are not in line with the current industry needs.

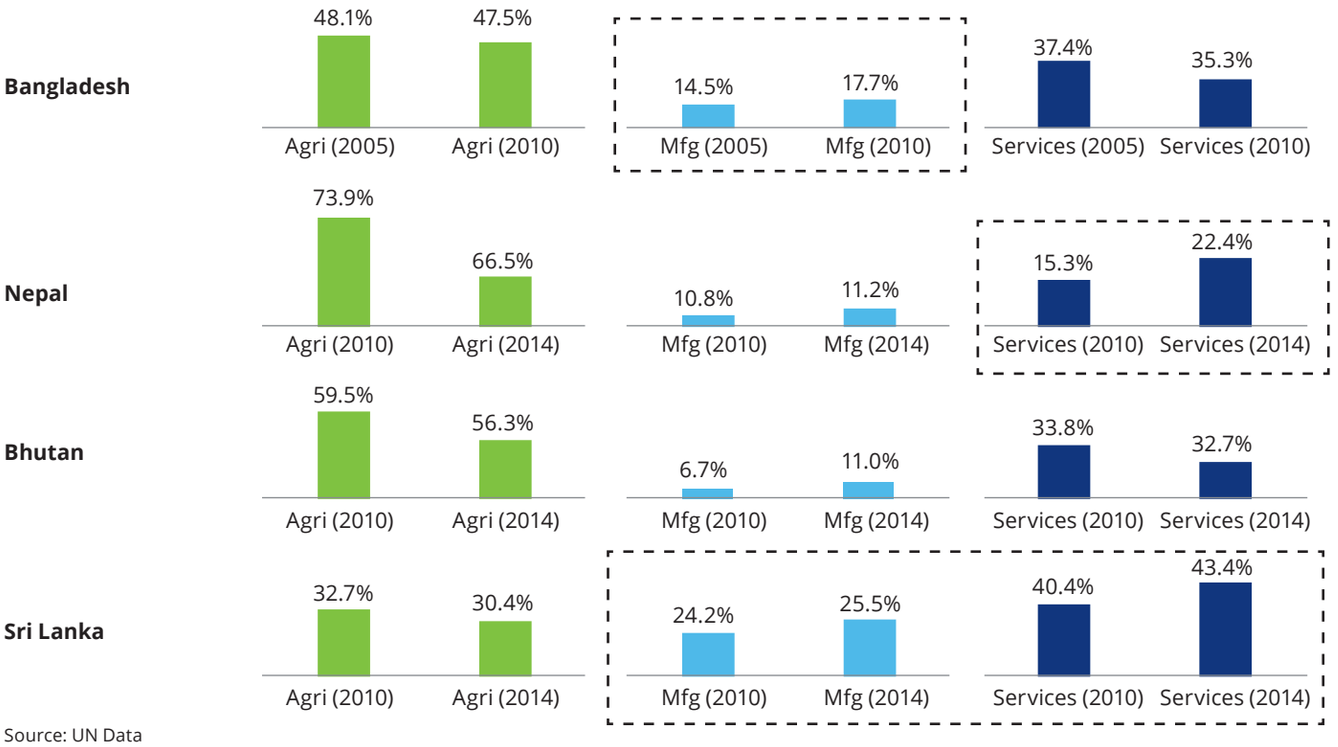
Overall Rank	State	Unemployment (per 1000) for 2015-16
1	Tripura	197
2	Sikkim	181
6	Arunachal Pradesh	89
7	Nagaland	85
13	Assam	61
16	Manipur	57
	India	**50**
19	Meghalaya	48
24	Mizoram	30

Source: Ministry of Labour & Employment (2015-16)

However, North East has a rich demographic potential with a growing youth population who can contribute a lot to the GSDP of all the states in the region, provided there are enough opportunities to provide them the requisite training and education infrastructure. The strategic location of the region in between the borders of Bangladesh, Nepal, Bhutan and Myanmar also provides opportunity for being absorbed into the growing number of employment opportunities that these developing countries are presenting. With improved access and quality, the region can not only avail these emerging employment opportunities in India and neighboring countries but also absorb demands for higher education for students in these countries who can look at the region as a potential hub for higher education.

Demands in the Neighbouring countries

A thorough look at the employment generation data of the adjoining countries in the subcontinent reveals that there is a significant increase in employment generation in different countries across industry and services. If properly trained, there is a significant potential for people in this region to get employment opportunities in these countries.



Source: UN Data

Bangladesh – The manufacturing industry, driven by Textile industry, has grown significantly in comparison to Agriculture and Services sector.

The services sector in Nepal has grown massively, driven by Tourism & Hospitality sectors. Though the earthquakes in the region had affected this growth, it is slowly turning around to its pre-crisis levels.

In Bhutan, agriculture generates more than 66% of the total employment. However, recent industrialization drives has increased percentage contribution to employment from a dismal 6% to 11%.

The services sector has remained almost stagnant at 33% of total employment generated.

The employment generation scenario in Sri Lanka is strikingly different with manufacturing sector contributing to more than 25% of the jobs. The country has also seen a significant rise in Services sector, supported by the rise in large number of tourists visiting the country.

With increasing shift from agriculture to industrial and service oriented economies, there needs to be a huge investment both on tertiary education as well on vocational training to prepare the future workforce.

Country	Government expenditure per tertiary student as % of GDP per capita (%)	Year
Bangladesh	24.1	2012
Bhutan	53.9	2014
India	49.2	2013
Sri Lanka	26.9	2015
Nepal	25.3	2015

Source: UNESCO

Traditionally, the government in South Asian countries, especially, India and Bhutan[72], have played a dominant role in funding higher and tertiary education initiatives. However, there is a growing need to consider new funding model where higher education institutes would partly finance their own activities, drawing private investments.

Private spending on higher education has been uneven within the countries, focussed on some particularly urban regions and in specific courses where there is greater demand from the students. While the quality of education in several private institutions is a focus area to be addressed, accessibility is also another factor to a large majority of the student population. However, given the supply-demand scenario, the private institutes have come up in a big way to fill the void. Given the issues highlighted in NER, it is therefore imperative to encourage more private players to ride the growing demands of higher education in the region.

While focus on higher education will enable the growth of knowledge workers, it must be supported by an equal focus on the skill development and vocation training, to prepare the workforce for industrial work involving the use of machine operations. There is a significant skilling requirement[73] needs in South Asia, both the current workforce (upskilling) and new workforce, to prepare them for future jobs. Some of the focus sectors in each of these countries and the key challenges for skill development has been highlighted below.

Country	Key Sector	Focus Industries	Key Challenges
Bangladesh	Manufacturing	Textile	Illiteracy, non-employability of graduates in workplace (due to lack of soft skills, ability to work in teams etc.) and preference to work only in the government sector are seen as key challenges
Sri Lanka	Services	BPO, Information Communication, Hospitality	Major skills that are in demand include English Communication and IT Skills
Nepal	Services	Hospitality	There is a significant skill gap in the recovering Tourism sector in Nepal which needs a large number of resources who have good English speaking capabilities. Other skill sets that are in demand include customer relations, complaint management and critical thinking skills
Myanmar		Energy, Gems Tourism	Low minimum wages in major industries is a key challenge[74]. Shift from Agri to Services will see potential skill gaps in 2030

In spite of the large opportunities available in industries and service sectors across entire Asia, there is a massive shortage of skilled manpower. One of the key reason for this is the acute shortage of students going for courses in technology and industrial engineering and are taking up more courses on social sciences and business law. A large number of the students in the **ASEAN countries are enrolled in social sciences, business and law[75].** However, to take the advantage of the technological changes that is driving the fourth industrial revolutions, a large student pool is required in **engineering, healthcare and natural sciences.**

Pupil-Teacher ratio across countries

Country	Pupil-Teacher ratio (tertiary education)	Year
Bangladesh	26.0	2011
Bhutan	7.8	2012
India	24.3	2015
Sri Lanka	45.2	2011
Myanmar	25.3	2012
Nepal	60.0	2013

Source: UNESCO

Student - teacher ratio in most Asian countries reveals that quality teachers need to be recruited to impart world class training. This needs to be backed up by proper training of teachers and infrastructure.

However, to take the advantage of the technological changes that is driving the fourth industrial revolutions, a large student pool is required in **engineering, healthcare and natural sciences.**

Students coming from neighbouring countries	UG	PG Diploma	Diploma	PhD	M.Phil	Post Graduate	Others	Total
Nepal	7544	19	617	43	1	1272	78	9574 (22%)
Bhutan	2440		233	1		156	95	2925 (7%)
Sri Lanka	962	15	25	23	1	144	19	1189 (3%)
Bangladesh	854	11	12	26	1	182	14	1100 (3%)
Myanmar	63	21	25	46	6	91	16	268 (1%)

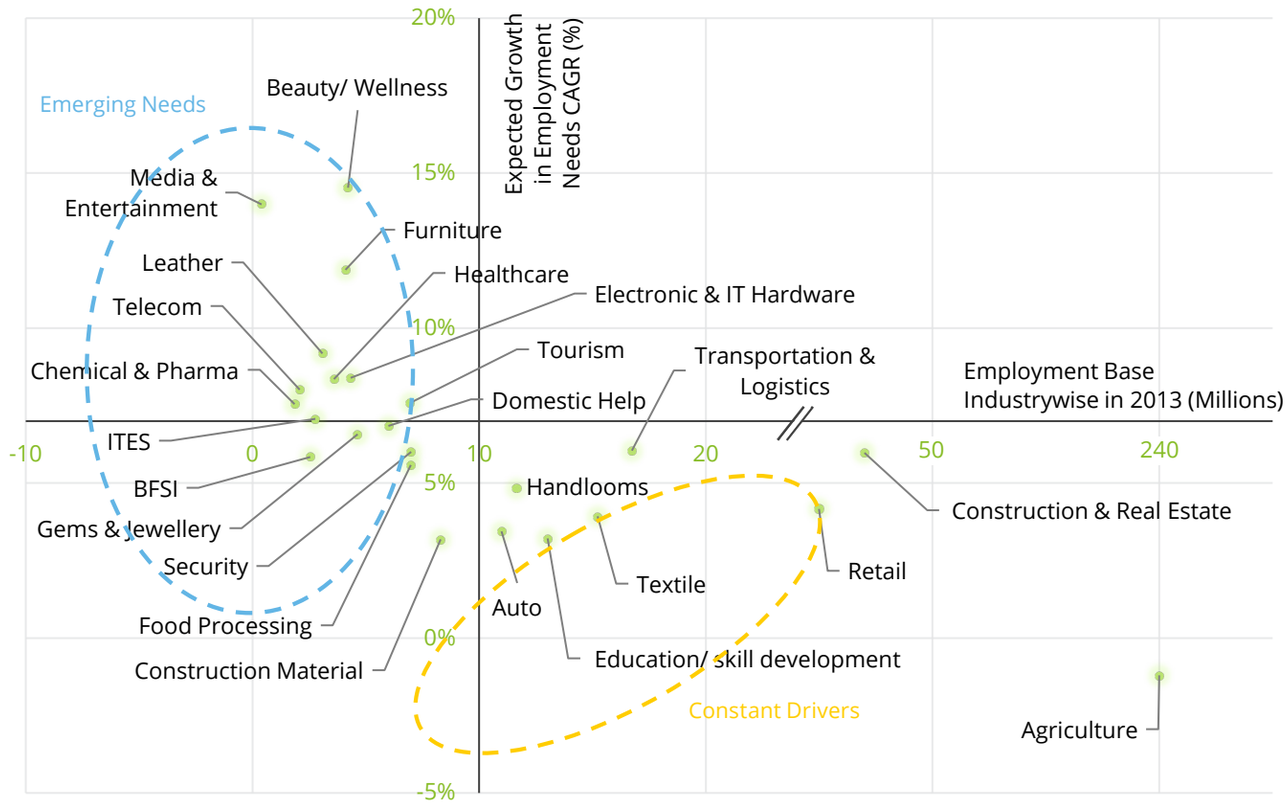
Source: MHRD (2015-16)
Note: The % figures in total column indicate, % of the overall student FTA

Given India's prominent education infrastructure in the region, a large number of students usually comes to the country to fulfil their higher education aspirations. Nepal and Bhutan are two of such countries from which the maximum intake of students takes place, followed by Bangladesh and Sri Lanka. Of the total foreign students who come to India, Nepal, Bhutan, Bangladesh and Myanmar together comprise around 35 % of the total arrivals[76].

Owing to its proximity to the South East Asian countries, North East can look toward bridging this demand supply gap by building better infrastructure in the form of world class educational institutes, signing Memorandum of Understanding with global institutions and attracting good quality of teachers and professionals. Attracting talent pool from neighbouring states and countries can be brought through

- Courses in areas like technology and healthcare to attract students from nearby ASEAN countries
- Start short term courses in subjects like Beauty & Wellness, Hospitality Management, Textile and other key sectors where there is considerable potential for employment in the entire region.

Industry wise Employment Needs



Source: Ministry of Skill Development & Entrepreneurship

Sectors driving employment generation in India

The employment base in India is expected to grow from 459 Mn (2013) to 579 Mn in 2022 at a 3% CAGR. As India continues to move away from an agrarian economy, greater number of job generation are expected in Manufacting and Services sector. Service Sector which comprises majorly of ITES, Real Estate & Housing, Financial Services, Healthcare, Tourism, Media, Consultancy, R&D Services and Logistics[77] is going to be the key driver of economic growth Agriculture, Retail and Construction / Real Estate comprises of the major share (70%) of employment generation. Though construction and Retail are slated to grow above the national average (3%), employment generation through agriculture is going to slow down.

Constant employment generators, i.e., the industries already generating more than 10 million jobs and still expected to grow above the national average (3%) include Retail, Construction, Education, Textile, Handloom and Logistics

Some of the **emerging sectors** that are going to generate new employment include Beauty/Wellness, Furniture, Media, Healthcare, Tourism amd Electronics among others.

Some of the industry specific trainings that are currently provided across India are:

Sector	Industry	Type of Skills required	Training Courses/ Centres across India
Services	Healthcare	Doctors, nurses, technicians and paramedics	478 ANM (Nursing) / MPW (Multi-purpose Health Worker) and 28 HFWTC (Doctors) training centres Private hospitals also provide trainings on healthcare
	ITES	Software & Hardware engineers	Short Term Courses by DOEACC (IT/ Software skills) & CEDTI (Electronics, Process Control etc).
	Tourism and hospitality services	Front office staff, F&B services and kitchen and housekeeping staff, ticketing and sales, tour guides	15 food craft institutes under state governments Tenure: 6- 12 months
	Building and construction industry	Crane operators, electricians, welders, masons, plumbers, carpenters, painters, etc.	640 building centres under HUDCO, Construction Industry Development Council Tenure: 1 -6 months
	Organised retail	Shop floor executives, back-store operations, merchandising	Retailers Association Skill Council of India (RASCI) conducts regular training through its partners – trainers, placement agencies and government bodies. Private players like Future Learning[78] (arm of Future Retail) has also entered this space
Manufacturing	Textiles and clothing	Power loom operators, apparel manufacturing, fashion design, QA, knitwear manufacturing, sewing machine operators	Weavers Service Centres (23),Power Loom centres (13), North Eastern Handicrafts & Handloom Development Corporation Tenure: 15 days – 1 year
	Heavy Industries	Machine operations,	Short Term courses on Counselling, retraining and redeployment of rationalised workers of CPSEs (Formerly NRF)
	Food Processing Industries	Machine operators, preparation of concentrates, edible oil etc.	Short Term courses run by Institutions like Central Food Technology Research Institute, Paddy Processing Research Centre, PHTC, Council of Entrepreneurial Development Programme (EDP)
Agriculture	Agriculture	Non Farming activities like Soil Testers, Agricultural Extension Service Providers	Training in agricultural extension (21 training centres), training in use of agricultural implements & machinery, soil conservation training centre, LFQC&TI, NPPTI, cooperative education and training

Success Story: Singapore in Higher Education

Education system in Singapore has played an instrumental role in country's economic development. Education has been made a priority at all levels by the Singapore Government and the country today has one of the best performing public school systems globally. The Singapore government invests heavily in its human resources which is reflected in significant investment in education since the country does not have any other natural resources. The outlay for education in the 2015 national budget was S$12.1 billion (Business Times, 2015), comprising 15.1% of its total budget, making it the 2nd largest allocation after defence[79] and higher than even healthcare and transport.

The government focus in developing the education system in the country has paid rich dividends in terms of economic development. The high quality of education has also been reflected in the consistent high academic performance of the Singapore students in PISA (Programme for International Student Assessment), one of the leading benchmarking test of literacy skills in mathematics, science, problem solving, and language conducted by OECD.

Higher education has gained significant importance in Singapore over the last two decades which has resulted in more higher education institutes during this period. The government of Singapore had been proactive in attracting universities of global repute to Singapore through its World Class Universities program in 1997. In 2002 the Government launched the "Global Schoolhouse Initiative" with an objective of attracting 150,000 foreign students and increasing the percentage contribution from higher education to the national economy to 5% by 2015.

Education System in Singapore is a centralised one with the policy making at the ministry level; however for effective implementation of the policy the educational institutes are given adequate autonomy. This has worked well in the small education system of Singapore, where individual institutes have autonomy in implementing the national policy.

Singapore has made significant progress in its ambition to be the "Boston of the East" and has firmly established itself as one of the region's premier education hubs. Additionally, more Singaporeans are also choosing to study at home attracted by their now highly ranked local universities, diverse program offerings, and increased government funding.[80]

Some of the key features of Singapore Education System, which has resulted in high performance of its students are provided below:

- **Focus on differentiated learning:** The objective of the education policy is to ensure that each student is adequately trained to be employed. It works on the philosophy that each student learns differently and has different strengths. Since different students might have different needs, focus of the policy is to train the students based on their core strengths. Depending on the individual preference / strengths, one can be trained to pursue higher education while others can be trained in areas where application is required. However, it is believed that irrespective of the path a student decides to progress on, foundation knowledge is essential for progression. This approach has helped students get meaningfully employed and reduced unemployment.
- **Responsive to Changes in Education Landscape (Domestic and Global):** The country's education system is a responsive system that takes into consideration the changing national and international landscape. The outcome of education is perceived to prepare students to be relevant with the times and make meaningful contribution to the ecosystem. In order to be relevant with changing times, it has undergone four iterations since its independence in 1965, the same has been tabulated below:

Phase 1	Phase 2	Phase 3	Phase 4
Survival Driven	Efficiency Driven	Ability Driven	Student Centric and Value Based
1965-1978	**1979-1997**	**1997-2012**	**2012 onwards**
As the country was faced with numerous challenges after independence, in this period it focused on building foundation knowledge of students to make them employable.	In this phase the focus was on building skilled manpower to sustain development of the country as the economy had just opened up leading to demand from multi-national companies for skilled manpower.	As the world economy moved from an industry to knowledge based economy, the education system started focusing on individual child to develop their talent so as to allow them to demonstrate their creativity and innovation.	Keeping in view the VUCA (Volatile, Uncertain, Complex and Ambiguous) world, development of values in students and a concerned citizen to cope with the dynamics of the VUCA environment is being focused on.

- **Outcome Oriented Education System:** In order to provide a clear direction to the education policy, timely assessment and refinement of the policies, it is important to clearly identify and articulate desired outcomes of the education policy. The Singapore education system has adopted the above and defined four key outcomes of its current education phase - a confident person, a self-directed learner, an active contributor and a concerned citizen.

- **Alignment of Policies, Practices and Preparation:** Apart from the above, the success of the education system in Singapore can also be attributed to the triple pillars of the PPP (Policy, Practice and Preparation), which mainly involves three key stakeholders:
  - **Policy:** The Ministry of Education (MoE) is the nodal agency which formulates policies for achieving desired outcomes of education in line with its objectives
  - **Practice:** The Schools translate polices into practices. Schools work with teachers to identify the areas of professional development for teachers so that they are equipped to necessary competencies to deliver
  - **Preparation:** The final step are the training institutes which prepare teacher to deliver effectively. In Singapore, National Institute of Education is the sole teacher education institute with the responsibility to prepare teachers in the education system

    MoE follows a participatory approach in policy formulation by taking inputs from various stakeholders such as parents, teachers, academicians, industry. Guided by the outcome / goals, the policies range across the content, curriculum, practice and assessment.

- **Proactive Role of National Institute of Education:** It is widely published in many reports that high performing education system have good quality school leadership and teachers as they enable student learning. This makes the role of National Institute of Education extremely important as it is the sole training institute for teachers in Singapore. To ensure its objective the Institute adopts a three pronged approach – Responsiveness, Relevance and Rigour. Further the Ministry of Education in Singapore invests heavily in the institute to ensure high quality teaching workforce. The National Institute of Education has developed a new model for teacher education – Teacher Education Model for the 21st Century (TE21).[81]

Attributes of TE21

V1: Learner Centered Values
- Empathy and Belief that all Children can learn
- Commitment to nurturing each child
- Valuing diversity



V2: Teacher Identity
- AIM for high standards
- Enquiring nature and quest for learning
- Adaptive, Ethical and Professional

V3: Service to Profession / Community
- Collaborative learning and practice
- Social responsibility and engagement
- Stewardship

Skill
- Reflective shills and pedagogical skills
- People management skills
- Administrative and management skills
- Communication and Technological Skills
- Innovative and Emotional skills

Knowledge
- Self, Pupil and Community
- Subject content, Global and Environment
- Polices, Curriculum and multi-cultural literacy

There is no one factor which has contributed to the success of the education system in Singapore. Instead it is the collective play of all the factors which has resulted in education excellence in the country. Many countries have focused on education infrastructure but poor quality teachers have not prevented from achieving the desired results. Singapore's education system has emphasized on the role of education and teachers in nation building. Accordingly, it has ensured polices have focused on development of teachers and creating a robust education system, which has adapted with the changing times to ensure continual success and scale over the years

Success Story: Maharashtra in Higher Education

The Sarva Shiskhsha Abhiyan (SSA) and Rashtriya Madhyamik Siksha Abhiyan (RMSA) have been instrumental in creating a strong foundation for the primary and secondary education in India. However, there had been a need to address the issues of **access** and **quality** in **higher eductaion** since the gross enrolment ratio (GER) in the age bracket of 18-23 is signifcantly below the global standard and in order to tap the demographic advantage to a dividend.

The XII th Plan lays more focus on higher eductaion in the country to make it more relevant to the global needs and address the issues of accesability and quality. There has been a marked change in the planning and funding approach in this plan with greater focus on (a) equity issues creating higher imapct (b) Planned expansion with focus on adding capacity/ consolidation in existing set ups (c) research and innovation (d) outcomes.[82]

With these broad objectives, Rashtriya Uchchatar Shiksha Abhiyan (RUSA), a Centrally Sponsored Scheme (CSS), was launched in 2013 which was aimed at providing strategic funding to eligible state higher educational institutions.

The ratio of central to state funding ould be in the ratio of 60:40 for general category States, while it would be in the ratio of 90:10 for special category states (including NER) and 100% for union territories.[83] The funding would flow from the Centre through the respective state governments/union territories which will create respcetive State Higher Education Councils (SHECs) who will provide the funding to the higher educational institutes. The funding to states would be made on the basis of critical appraisal of State Higher Education Plans, which would describe each state's strategy to address issues of equity, access and excellence in higher education.

With these broad objectives, Rashtriya Uchchatar Shiksha Abhiyan (RUSA), a Centrally Sponsored Scheme (CSS), was launched in 2013 which was aimed at providing strategic funding to eligible state higher educational institutions.

How Maharashtra has benefitted

Maharashtra has seen significant improvement in its higher education scenario post the RUSA implementation. Based on the framework for measuring the impact as formulated in the RUSA guidelines, key learnings that can be emulated from this western state are highlighted below



Focus Areas	Steps adopted by the State[84]
Formation of Cluster University and Infrastructure Upgradation	• **First State in India** to have the concept of Cluster University implemented (four institutions—Elphinstone, Government Law College, Government BEd College, led by the Institute of Science—will form the cluster university.) • **Nine varsities** of Maharashtra identified to receive block grants of Rs. 20 crore each to modernize the infrastructure
Accreditation and Quality Assurance	• State has taken proactive steps in bringing about academic reforms through **accreditation** • **Gap Identification** - Functioning of IQACs in Colleges –Weak, Non-existent or on paper, Non-standardised process, formats and outcomes for Academic Audits, Sporadic or non-existent institutional mechanism to monitor academic quality or plan interventions. • **Adoption of a bottom up approach** in the State Level Quality Accreditation Council to ensure streamlining of academic audits, rankings of colleges, effective monitoring and mentoring, rolling out capacity building interventions • Total Number of Universities Accredited (Active): 29 of 45 Universities (64%) • State Universities Accredited: 9 of 13 (69%) • Aided Colleges Accredited (at least once): 882 of 1172 (75%) • Accreditation of Govt. Colleges (Active): 14 of 23 (60%)
Autonomy	• State has recognised academic autonomy to be a pre-requisite for academic excellence. Formation of an **expert group** Involving principals, HODs and other key stakeholders) will facilitate proposals from eligible colleges on academic autonomy.
Research and Innovation	• Maharashtra is the **first state** in the country to receive RUSA grant of **Rs. 20 crores** under 'Research and Innovation' for setting up Innovation and Technology Transfer Hubs. • **6 hubs** (thematically provisioned so as to recognise local context) are being setup to incubate research projects that have potential for scaling up, commercialization or technology transfer to industry • **Expert committee** set up comprising of industry, management and academic expertise to mentor • Focus on **Social development** research and public policy, Advanced research and technology , Ideation and open innovation
Faculty Improvement	Allocation of funds for setting up a dedicated academic staff college to train academic faculty and administrative and support staff.
Choice Based Credit System (CBCS)	The System will enable students to choose subjects for a fixed number of credits, allowing greater flexibility. This system can be an enabler to students in opting for subjects as per choice, enhancing chances of employability and seamless movement across institutions.[85]
Student Initiatives	• • "Kanaad" a student led **e- platform** developed with an objective of – Creating a **culture of engagement** of youth and senior citizens with development issues. – Providing a platform for presentation of **creative ideas**, innovations and solutions for **National Development** – Creating an **ecosystem for applied research** and bridging gap between Academia and Society – Providing platform for providing **mentorship by experts** to the students – Creating a **knowledge repository** of innovations and Researches in multilingual format – Providing learning from **success stories** and failed experiments • The State organised RUSA Logo competition and has plans of launching RUSA Internship who can work with Government Organisation and contribute towards improving higher education in the Sate • Plans to launch RUSA App Wallet so as to effectively manage the entire ecosystem information on the institutions (State Councils, Universities, Colleges) real time with a mobile application

Focus Areas	Steps adopted by the State[84]
Inclusive Education	The State has taken active steps in promoting inclusive education. Some of the key steps (which the State has planned) include among others: • Setting up **Language Lab, Women Development Cell and Resource Centre for Inclusive Education** • **Launching of a Pilot project:** In collaboration with St. Xavier's Resource Center for the Visually Challenged (XRCVC) Mumbai • Setting up 3 **Centres for Inclusive Education** sanctioned by SPD RUSA at the Shivaji University, NMU Jalgaon and Shivaji College Amravati

Outcomes

- Improvement in GER from 27.4 in 2011-12 to 29.9 in 2015-16 which is significantly higher than the national average of 28
- Improvement of student-teacher ratio
- Improvement in quality of education which is implied from the increase in the number of accredited schools and employability

Success Story: Kerala in Skill Development

While higher education continues to be the key enabler for creating high value jobs, skilling is equally important, as the region currently has a shortage of skilled labours and will need manpower with growing contribution for manufacturing and services sector. An ideal case in point can be the model adopted by the **Kerala government** to train people to cater to the growing demand of construction workers in the GCC. The Government of Kerala had setup the **Kerala Academy of Skills Excellence (KASE)** as a non-profit company to focus on specialty skill development initiatives for different industries like construction, retain, tourism and hospitality.

It aims at skilling ~50,000 labor every year through a hub and spoke model spread over 14 districts in the state. KASE aims to form separate special purpose vehicles (SPV) using the PPP mode to take care of skilling development for separate industries. Some of the SPVs developed under KASE are highlighted here.

Construction Academy in Chavara, with the objective of conducting courses for the skill development of construction workers across all categories – from carpenter, plumber, electrician to draftsmen with AD expertise, supervisors and site managers.

Multi Skill Development Centre (in partnership with Smart city, Kochi) which aims to skill about 40,000 people per year

Kerala State Institute of Design (KSID), which aims to promote design education and enhance use of technology, management, creativity and design skills among the youth of the state and employability centres with the aim to test and assess the skill level and aptitude of the youth and get them employment accordingly

Way Forward

With the increase in Indian economy and globalization, there would be a huge skill demand supply mismatch, if the skilling ecosystem is not developed properly. To take advantage of this opportunity, it is imperative to train people in this region, given the high literacy levels and fluency of speaking English in the North East.

Focus Industries

The key industries which will play a major role in providing employment to the skilled workforce of the future will be from the following industries as highlighted.

Key Focus Sectors

Manufacturing	Textiles, Building Material, Automobile
Services	Retail, Logistics, Healthcare, Tourism

Close to 50% of the blue-collar jobs generated by these industries are machine dependent. Since a large amount of technical skill development is required for these jobs, it is imperative that the Government as well as the Private sector work together and collaborate to impart skill trainings to the people in this region.

Apart from this there is a huge scope of developing services sector – like tourism security services and healthcare in the North East which will require adequate skilled manpower in the form of tourist guides, drivers, nurses and technicians. Since, the sector requires a focus on interacting with people, focus must be put on providing training on soft skills and improving their orientation towards providing better quality services.

To meet the skilling gap the following action points can be taken by the various stakeholders – Government and Private sectors, working hand in hand to realize the true potential of the region.

Area	Key Themes	Recommendations
Access	**Setting up of institutes**	**Setting up public and private institutions** Both the public as well as the private entities must come forward to setup quality institutions staffed with qualified teachers. The institutes must also focus on providing more options which will link with industry requirements of India and the neighbouring countries. **Setting up India International Skill Centre (IISC)** The Ministry of External Affairs in collaboration with NSDC is planning to build IISCs across India aimed at providing skill training to youth to migrate overseas for work. The Government can look at establishing one such centre in the North East with the aim of catering to the needs of the South Asia. **Use of Corporate Social Responsibility (CSR)** While the private sector have started to include skill development as a part of their CSR initiatives, it still has a long way to go in order to significantly improve India's skill problem. Some of the key areas in which organizations can choose to focus on, especially in the NER include • Supporting community training initiatives • Creating skill development centres where there are no such centres • Involve local NGOs to coordinate their CSR activities in remote areas • Develop a strategic direction towards skill development by involving the leadership • Develop business plans around skill development/ training initiatives Building Infrastructure under PPP model Some of the key areas where infrastructure can be developed in PPP mode are: • ITI and Skill Development centres • Regional Vocational Training Centres • Incubation Centres supporting entrepreneurs

Area	Key Themes	Recommendations
	Labour Information Systems	**Labour Management Information Systems** NSDC through its Sectoral Skills Council (SSCs) has envisaged the formation of sector specific labour management systems, which will be a repository of all information pertaining to industry, trained workforce etc. The government must look towards building an integrated database across all SSCs in order to ensure availability of **reliable data** which will help in **better policy making**
	Connectivity	**Use of ICT to improve digital literacy** Promotion of digital literacy and preparation of **e-learning** modules in **regional languages** can be a key enabler to impart skill training even for people living in the remote areas of North East. However given the terrain of these region it will be necessary to develop internet connectivity which can enable the people to avail these e-learning programmes.
Quality	**Availability of quality teachers & capacity building**	**Development of Quality Training** To impart proper training to the workforce it is imperative to develop a pool of trainers who have adequate experience in the industry. The private sector can provide quality trainers who are willing to join the various skill development initiatives and train the future workforce with current industry requirement. **Industry adoption of training infrastructure** The industry can adopt the Singapore model and come forward in setting up specialized skill development/ training institutes (Centres of Excellences). The government can provide significant financial incentives towards building and running the centres. Industry adoption of training institutes can also fuel the skill development ecosystem, where a large amount of **on-the-job training can be conducted and suitably placed in the private sector** units who have adopted these training institutes. Funding can be jointly provided by the government and the industry.
	Education System	**Focus on Soft Skills** Soft skills would be crucial for tapping into the global and domestic demands for the growing services sectors like hospitality, wellness, management etc. **Industry collaboration to devise course curriculum** Industry and government should work hand in hand to **devise curriculum** for major technical and management courses **Collaboration with foreign institutes** Institutes (both Government aided as well as private) can collaborate with foreign institutes to develop exchange programs, training and internship programs. Even courses can be developed (certificate/ short term courses) in joint collaboration to cater to skill gaps in those countries. The Government of these countries must also develop suitable policies to ensure better linkages

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Glossary

Acronym	Full Forms
ANM	Auxiliary Nursing and Mid Wifery Course
ASEAN	Association of South East Asian Nations
AYUSH	Department of Ayurveda, Yoga, Naturopathy, Unani, Siddha and Homeopathy
BBIN	Bangladesh Bhutan India Nepal
Bn	Billion
BPO	Business Process Outsourcing
CAGR	Compounded Annual Growth Rate
CEDTI	Centre for Electronics Design and Technology of India
CHC	Community Health Centre
CPSE	Central Public Sector Enterprise
Cr	Crores
CSR	Corporate Social Responsibility
DOEACC	Department of Electronics and Accreditation of Computer Classes
DPR	Detailed Project Report
DTA	Domestic Tourist Arrival
EDP	Entrepreneurship Development Programme
EMR	Electronic Medical Records
ETA	Electronic Travel Authorization
FDI	Foreign Direct Investment
FDI	Foreign Direct Investment
FICCI	Federation of Indian Chamber of Commerce and Industries
FTA	Foreign Tourist Arrival
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GER	Gross Enrollment Ratio
GoI	Government of India
GSDP	Gross State Domestic Product
GTO	Golf Tour Operators
HUDCO	Housing and Urban Development Corporation Limited
ICT	Information and Communication Technology
IISC	India International Skill Centre
INR	Indian Rupee
IQAC	Internal Quality Assurance Cell
IT	Information Technology
ITES	Information Technology Enabled Service
ITI	Industrial Training Institute
ITI	Industrial Training Institute
JCI	Joint Commission International
JV	Joint Venture
KASE	Kerala Academy of Skills Excellence
MHRD	Ministry of Human Resource Development

Acronym	Full Forms
Mn	Million
MORD	Ministry of Rural Development
MoT	Ministry of Tourism
MOU	Memorandum of Understanding
MPW	Multi-Purpose Health Worker
MSDE	Ministry of Skill Development and Entrepreneurship
NABH	National Accreditation Board for Hospitals and Healthcare Providers
NABL	National Accreditation Board for Testing and Calibration Laboratories
NCVT	National Council for Vocational Training
NEC	North East Council
NER	North East Region
NGO	Non-Governmental Organisation
NITI	National Institution for Transforming India
NPPTI	National Plant Protection Training Institute
NSDA	National Skill Development Agency
NSDC	National Skill Development Council
OOPE	Out of Pocket Expenses
PHC	Primary Health Centre
PHTC	Public Health Training Centre
PMKVY	Prime Minister Kaushal Vikash Yojana
PPP	Public Private Partnership
PPP	Pubic Private Partnership
R&D	Research and Development
RASCI	Retailers Association Skill Council of India
RNFC	Route Navigation Facility Charges
RTDC	Rajasthan Tourism Development Corporation
RUSA	Rashtriya Uchchatar Shiksha Abhiyan
SCVTR	State Council of Vocational Training
SPV	Special Purpose Vehicle
SSC	Sectoral Skill Council
SSDM	State Skill Development Mission
TVET	Technical and Vocational Education Training
UHC	Universal Health Care
UNESCO	The United Nations Educational, Scientific and Cultural Organization
USD	United States Dollar
USOF	Universal Service Obligation Fund
VoA	Visa on Arrival
WHO	World Health Organisation

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