Cross-Border Value Chains in North East India

PROSPECTS & THE WAY FORWARD



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LIST OF ABBREVIATIONS

AAI	Airports Authority of India
ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
APEDA	Agricultural and Processed Food Products Export Development Authority
B Tech	Bachelor of Technology
BBA	Bachelor of Business Administration
BCA	Bachelors in Computer Application
CAGR	Compound Annual Growth Rate
CUTS	Consumer Unity & Trust Society
ESCAP	Economic and Social Commission for Asia and the Pacific
EU	European Union
FY	Fiscal Year
FICCI	Federation of Indian Chambers of Commerce & Industry
GDP	Gross Domestic Product
GNI	Gross National Income
IMF	International Monetary Fund
IIT	Indian Institutes of Technology
IIM	Indian Institutes of Management
IIIT	Indian Institute of Information Technology
KPMG	Klynveld Peat Marwick Goerdeler
LCS	Land Customs Stations
MDoNER	Ministry of Development of North- Eastern Region
MHRD	Ministry of Human Resource Development
M-Visa	Medical Visa
NABL	National Accreditation Board for Testing and Calibration Laboratories
NABH	National Accreditation Board for Hospitals & Healthcare Providers
NEC	North East region Council
NER	North-Eastern Region
NIT	National Institutes of Technology
NSDC	National Skill Development Corporation of India
SAARC	South Asian Association for Regional Cooperation
USD	United States Dollar

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FOREWORD



Ranjit Barthakur
Chairman
FICCI North East Advisory Council

With the emergence of India as one of the major economic powerhouses, our country's North East Region (NER) will find itself more and more in the spotlight in the decades to come. With abundant natural resources, burgeoning human capital, and infrastructural upgrades the Region's potential will make a significant impact on India's economic and social development.

5,300 kms of international borders and its geographic position can easily make North East India a hub of trade, commerce and connectivity between India and its eastern neighbours. Already three major projects of Pan Asian Connectivity, the Asian Highway I and II and the Trans-Asian Railway, are proposed to crisscross the region before connecting Bangladesh, Nepal, the Indian Mainland and beyond. While these initiatives inspire hope, a lot more will be required in terms of planning and action on the ground to ensure inclusive growth in this strategically important part of India. FICCI has proposed a comprehensive development strategy for the region which aims to fulfil the aspirations of the region and presents a vision for the region.

The connectivity summits organised by FICCI during the last four years highlighted specific opportunities for improved connectivity and suggested a way forward. We have seen a lot of forward movements since then in terms of improved connectivity within the region and the pace of implementation of cross-border connectivity projects has picked up.

While connectivity is an absolute necessity for economic development, improved connectivity by itself will not be enough to bring about transformational changes in the region, unless accompanied by effective measures to connect economic value chains across borders.

This study which looks at possibilities of unlocking the potential for value chains in food processing, medical value tourism and higher education will provide important pointers for policymakers, investors and traders interested in taking advantage of the unique geographical location of North East India.

I would like to thank the team at CUTS International for partnering with us in creating this important report.

PREFACE



Bipul Chatterjee
Executive Director
CUTS International

Before the partition of the Indian sub-continent in 1947, the North East region of India was one of the most prosperous parts of the country. This was primarily because of seamless connectivity that this region enjoyed with the rest of the un-divided Indian sub-continent and beyond. Following India's independence and the re-drawing of political boundaries, the region lagged behind other parts of India in realizing its potential for socio-economic development and it was until the formulation of India's Act East Policy in mid-1990s, the North East region largely remained isolated from India's development paradigm.

Following this and with a re-orientation of India's outreach towards its eastern neighbours in earlier part of this decade – from Look East to Act East – a transformation is evident in the direction of the policies of Government of India towards the development of the North East region. After years of spending public funds and getting negligible returns in terms of improvement in livelihoods of the people of the North East, the Government has realised the need for improving the region's connectivity with the 'mainland' India and her neighbours such as Bangladesh, Bhutan, Myanmar and Nepal.

This policy shift is already showing results. It has not only increased the awareness about the need for having better physical and other forms of connections between this piece of land with the surrounding economically progressing geographical regions but has also prompted measures at the state as well central levels.

While there are 'Act East' and related initiatives like Bangladesh-Bhutan-India-Nepal (BBIN) Motor Vehicles Agreement, India-Myanmar-Thailand Trilateral Highway, Bangladesh-China-India-Myanmar Economic Corridor and so on, some of the states of the North East region have also risen to the occasion by attempting to have policies in place to complement these initiatives. Assam, for example, is working on a Logistics Policy, while Manipur also contemplates having a set of rules to support their trade endeavours. Similarly, the enthusiasm about the border haats in Tripura and Meghalaya is far too prominent to be ignored.

With these initiatives and emphasis on connectivity comes an inevitable question of 'what next'. The North East region is marred with a

rudimentary level of industrialisation. This makes the natural agri-horticultural and mineral resources, and also some low-technology goods and services their obvious choices as items for trading. As this region shares an international border spanning around 5,000 kilometres with its immediate neighbours, and China, its proximity to the neighbouring countries, which is more than its closeness to the 'mainland' India, necessitates that cross-border trade on these items are specifically encouraged.

To make this happen, inventing, re-inventing and bolstering commodity/product-specific value chains between the North East region and her immediate neighbours is an absolute must. This is more so, as the history of mutual dependence for factors of production as also the means of livelihood within this sub-region dates back to eternity, and extends to very recent times. The high extent of informal trade taking place within this sub-region bears testimony to this dependence. It is, therefore, imperative that the old value chains are revived, the new and the potential ones are identified, and those chains are strengthened with embedment of technology.

Therefore, we have prepared this Discussion Paper with an objective of highlighting the key potential areas where value chains can be worked out in the short run. Given this context, we have kept our focus on three key areas, such as food processing, medical tourism and education. I thank my colleagues for preparing this document and sincerely hope that the Indian industry will come forward to actively participate in this discourse.

I am glad to note that the Indian industry is taking note of it and we are happy to work with the Federation of Indian Chambers of Commerce and Industry one more time as a Knowledge Partner on the occasion of this Summit. I find this platform useful for its sharp focus on ground realities as it helps us, as a think-and-action tank, to segregate 'doables' from a set of all possible recommendations.

In future, we will be more than happy to work in tandem with the Government of India, state governments of the North East region and with the Indian industry to make a transformative change for furthering the socio-economic development of the North East region – from 'looking at trade possibilities' to 'making trade happen'.

I wish FICCI all the best in this endeavour, for development of the North East region, more than anything else, warrants an active participation of the best business minds.

EXECUTIVE SUMMARY

Despite having vast natural resources and huge demographic advantage in the form of an educated and young population, North East Region's (NER's) economic potential has not been fully realised. This has been largely attributed to the region's lack of connectivity with the rest of India. At the same time, the region also share large international borders with India's neighbours who are also key export markets including Bangladesh, Bhutan, Nepal and Myanmar. Thus, the region is strategically located as gateway to several export markets, including the large Association of Southeast Asian Nations (ASEAN) and Far East Asian markets. However, lack of connectivity of the region with neighbouring countries has never let India realise the true potential of the NER.

The importance of the region has been first realised by India in the early 1990s when the country drafted its first 'Look East Policy'

The importance of the region has been first realised by India in the early 1990s when the country drafted its first 'Look East Policy.' Since then, with the saturation of western markets and growing importance of South East Asia and Far East in India's trade basket, NER has gradually gained importance in India's policy making.

To strengthen the region's connectivity with the rest of the country and its immediate neighbours, a host of connectivity initiatives have been implemented by the Indian government. Several studies have pointed out that the economic development of North East is largely dependent on the region's capability to market its natural resources and demographic advantage. Forging cross-border value chains with its immediate neighbours can go a long way in this aspect.

Given this background, this paper envisages understanding the possible value chains in three selected sectors, viz food processing, medical tourism and higher education. The countries selected include Bangladesh, Bhutan, Myanmar and Nepal.

Food Processing

Owing to diverse agro-climatic conditions, North East produces a huge variety of fruits and vegetables. However, lack of storage and processing implies that a large amount of these produce are wasted thereby reducing the value of the produce. At the same time Bangladesh, Bhutan, Nepal and even Myanmar have a developing food processing sector but are dependent on imports for processing.

In such a scenario, North East can successfully forge regional value chains (RVCs) with these countries by exporting their fruits and vegetables to these countries for further processing. Moreover, given the fact that processed fruit and vegetable sector is a growing sector globally, final products can then be sold in not only the South Asian Association for Regional Cooperation (SAARC) market but other export destinations, including ASEAN and Far East. The new connectivity initiatives can be utilised to send inputs as well as final products to nearest ports in a much cost effective way.

Lack of proper cold storage facilities implies a significant amount of wastage

However, the success of this value chain depends on a number of factors. Due to small scale of farmers in the NER, aggregation and transportation is handled by middle men thereby making the supply chain inefficient and expensive. Lack of proper cold storage facilities implies a significant amount of wastage. Due to lack of clarity as to which products can be transported to the neighbouring countries through different land customs station (LCS) confuses both exporters and importers thereby hampering the possibility of such value chains.

Medical Tourism

While the health sector in the North East has gradually improved, the region is still facing shortage in terms of trained manpower, especially specialist doctors. Moreover, the quality of healthcare service at many times is not up to the mark. If these issues are addressed, the region has significant potential to be developed as medical tourism hub of India. This is more so because, Bangladesh, Nepal and Myanmar are some of the key countries sending medical tourists to India and NER shares extensive borders with all these countries. The region also has linguistic and cultural familiarity with these countries.

Higher Education Hub

India already attracts a significant number of students from Bangladesh, Bhutan, Nepal and Myanmar in undergraduate programmes and professional courses. Due to its proximity both geographical and cultural, NER can be developed as a potential higher education hub catering to the students from these countries. However, higher education scenario in the region is not even adequate to serve the local population. There is a huge gap in the infrastructure that is required to upgrade the higher education system in the region.

India already attracts a significant number of students from Bangladesh, Bhutan, Nepal and Myanmar in undergraduate programmes and professional courses

Currently, there is a lack of trained teachers and the curriculum is also not at par with the industry requirements which imply a number of graduates remaining unemployed. The region also lack reputed engineering, management and nursing colleges which have

the potential to draw large number of students from neighbouring countries.

Way Forward

Food Processing

- Encouraging cluster-based approach among farmers through formation of cooperatives and self-help groups (SHGs)
- Inviting private investment and providing assistance to local farmer cooperatives for building cold storages along the major roads connecting NER with rest of India and its immediate neighbours
- Clarity in rules governing the LCS as to what can be transported through them

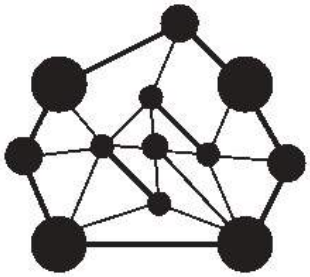
Encourage cluster-based approach, provide quality healthcare and improve quality of education

Medical Tourism

- Providing quality healthcare at affordable prices by encouraging more private investment and driving technology and innovation
- Ensuring better multi-modal connectivity with neighbours for easy access to the medical delivery centres in NER
- Facilitating medical tourists from immediate neighbours with policies, such as visa on arrival, basic consular services in NER, etc.
- Making financial transactions easier by strengthening coordination between the banking networks of Bangladesh, Bhutan, India, Nepal (BBIN) and Myanmar
- Promoting medical and wellness tourism as a package

Higher Education

- Improving the quality of education, especially technical in the region
- Making curriculum more suited to the needs of the industry not only for India but also for Bangladesh, Bhutan, Nepal and Myanmar as well
- Leveraging information and communication technology (ICT) and digital connectivity to reach maximum number of students.



INTRODUCTION

1. INTRODUCTION

South Asia remains one of the least integrated regions in the world despite being the fastest growing economic bloc. The level of intra-regional cooperation in terms of trade, investment, infrastructure and energy lags far behind other economic blocs, such as ASEAN and EU. Intra-regional trade in SAARC is only five per cent of the total trade — a mere increase of two per cent from 1990s. In comparison to this, ASEAN's intra-regional trade share increased from 17 to 25 per cent during the same period. Moreover, overall intra-regional trade is only two per cent of SAARC's gross domestic product (GDP) while it is 20 per cent for ASEAN. [1]

A recent Economic and Social Commission for Asia and the Pacific (ESCAP) study further reveals that the intra-regional trade in SAARC is only one-third of its actual trade potential leaving almost 67 per cent of trade potential un-tapped in the region. [2]

As the largest economy in the bloc and one of the fastest growing economies of world, India has understood the necessity and importance of regional integration for the economic progress of India's North Eastern region (NER), a land-locked region comprising eight states namely, Assam, Tripura, Meghalaya, Manipur, Mizoram, Arunachal Pradesh, Nagaland and Sikkim and endowed with abundant resources but suffering from poor connectivity with rest of India. Apart from being resource rich, the region's significance also lies in its 5,000 kms of international border which it shares with countries, including Bangladesh, Nepal, Bhutan, Myanmar and China.

NER was well-connected with the rest of India during the pre-independence period and this connectivity had fuelled industrialisation in the region. However, with partition, the region became almost disconnected from the rest of India barring the narrow chicken's neck (Siliguri corridor) in North Bengal. The ensuing economic isolation and disconnect with the rest of India led to the economic degradation of the landlocked NER. Despite the region's abundant natural resources and large international border, the economic potential of the region was never realised.

1. https://asiafoundation.org/resources/pdfs/IndiaRegionalTrade.pdf
2. https://www.unescap.org/sites/default/files/publications/Report_Regional_Economic_Cooperation_and_Integration_in_South_Asia_12052017.pdf

Table 1: State-wise Length of International Border in North-East (in kms)

State	Bangladesh	Bhutan	Myanmar	Nepal	China
Arunachal Pradesh	0	217	520	0	1080
Assam	263	267	0	0	0
Meghalaya	443	0	0	0	0
Manipur	0	0	398	0	0
Mizoram	318	0	510	0	0
Nagaland	0	0	215	0	0
Tripura	856	0	0	0	0
Sikkim	0	32	0	97.8	220.3

Source: http://mdoner.gov.in

Several studies, including one commissioned by the Ministry of Development of NER Region (M-DoNER) and the NER Council (NEC) in 2011-12 showed that the region can grow faster provided it can build cross-border value chains with its immediate neighbours. These cross-border value chains can also result in better integration among SAARC, especially between India, Bangladesh, Nepal and Bhutan.

Studies show that cross-border Regional Value Chains (RVCs) are having the advantage of less number of norms compared to global value chains (GVCs) as they cater to the needs and demands of a particular region. In case of GVCs, participants have to comply with the quality standards of a number of international markets, while in case of RVC, the compliance has to be with the prevailing quality standards of the region. Therefore, RVCs lead to greater integration, productivity and development of skills.[3] Hence, it is important to identify areas where NER has the potential to form cross-border value chains with its immediate neighbours.

Several studies have identified sectors, both in goods and services, in which NER has the potential to enter into value chains with its neighbours. A knowledge paper by CUTS (2017) identified a list of items that can be traded between NER and its neighbouring countries. The paper also mentioned that many of these products have the possibility of building value chains between NER and its neighbours.[4]

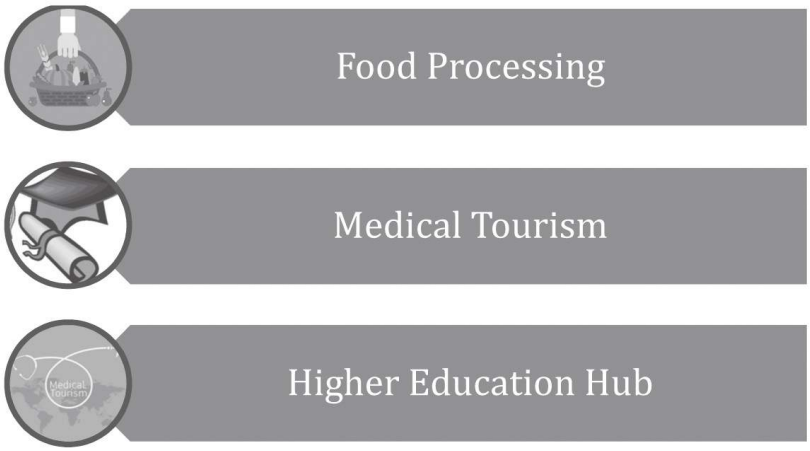
These items include fresh and processed fruits and vegetables, floricultural items, handloom and handicrafts, tea, coffee, rice, local herbs and herbal products, jute products, essential oil, minerals like coal and limestone, raw cotton, raw and processed rubber, handmade paper. Another knowledge paper by Deloitte and FICCI (2017) discussed how NER has a significant potential to engage in services value chains in the region.[5]

In this discussion paper, the possibilities of cross-border value chains between NER and its

3. https://www.orfonline.org/expert-speak/entering-regional-value-chain-is-better-for-india/
4. http://www.cuts-citee.org/pdf/Harnessing_the_Potential_for_Cross-border_Trade_between_North_East_India_and_its_Neighbouring_Countries.pdf
5. http://ficci.in/spdocument/23005/FICCI-event-Report_final.pdf

neighbouring countries are discussed in three sectors which include food processing, higher education and medical tourism. The sectors are chosen on the basis of the region's potential to participate in the supply chain. For instance, NER has significant capacity in producing fruits and vegetables which can be processed in the food processing industry of Bangladesh and sold in the markets of Nepal, India, Bangladesh, Bhutan and even Myanmar. Again the region's demographic advantage of being home to a large number of young, English speaking population makes it easier to for the region to participate in services value chains. Hence we have selected medical tourism and education.

Figure 1: Identified Sectors for Possible Cross-border Value Chains



Also as per the skill gap analysis study done by National Skill Development Corporation (NSDC) of India in 2012, the demand and supply gap in skilled and semi-skilled human resources in the eight NER states show that the demand may fall short of supply leaving excess supply of human resources and a significant possibility of outward migration (refer to Table 2 below).

Table 2: Demand-Supply Gap in Human Resources in the NER

States	Demand-Supply Gap in Human Resources
Arunachal Pradesh	6.04 lakh
Assam	80 lakhs
Manipur	8.18 lakhs
Meghalaya	4.02 lakhs
Mizoram	2.02 lakhs
Nagaland	9.03 lakhs

Source: https://www.nsdcindia.org/sites/default/files/files/ne-state-presentation.pdf

In the same study, food processing, healthcare and education and skill development have been identified as sectors where manpower requirement is expected to be incremental. At the same time there is a significant aspiration among the youth in the NER to seek employment in these sectors. Hence these sectors if properly developed can be potential employment generating sectors.

The subsequent chapters look at probable value chains in each of the three sectors and how NER can participate in these value chains. Following this, it discusses challenges that may restrict the formation of value chains and how enhanced connectivity in the region can resolve some of these issues. Finally, it provides recommendations as to what more can be done to make such cross-border value chains possible in the region.

Economic Backgrounds

Brief economic backgrounds of four neighbouring countries with cross-border value chain potential are given below.

Bangladesh

With a population of 156 million and a per capita gross national income (GNI) of US$1,190,



Bangladesh attained the World Bank's lower-middle income status in 2015. According to the International Monetary Fund (IMF), Bangladesh's GDP reached US$218.1bn in Fiscal Year (FY) 2016 with an annual growth rate of 7.1 per cent. The economy's growth is majorly fuelled by its export-driven ready-made-garments (RMGs) and light manufacturing industry. Other industries which are on a steady growth path include agro-processing, pharmaceuticals and ship-building.

Bhutan

Located between China and India and with a population of 758,288, Bhutan is perhaps the smallest among four countries considered for this study. As per Asian Development Bank (ADB) estimates, the country's GDP grew at 7.5 per cent in 2017 and is expected to grow at 6.7 per cent in 2018.



Agriculture is the major source of income and employment generation in the region. Other notable industries include hydropower and forestry.

Myanmar

Myanmar has recently emerged from a decade of economic and political isolation. As per ADB estimates, the country grew at 6.8 per cent in 2017 and is expected to grow at 6.6 per cent in



2018. The country has strong potential for broad economic expansion, possessing abundant natural resources, a strategic location at the crossroads of Asia, a young population, and a sizable market with wide-ranging investment opportunities.

Nepal

Nepal is a low-income developing nation with an estimated GDP of US$24.49bn in FY 2016-17. In 2017, Nepal's economy grew at 7.4 per cent and as per ADB estimates, it is expected to grow at 5.9 per cent in 2018.



The economy is primarily agrarian with agriculture accounting for almost 30 per cent of the GDP and 66 per cent of employment. India accounted for 62.2 per cent of Nepal's total trade in FY 2015-16. In FY 2015-16, Nepal exported US$661.2mn worth of goods, mainly woollen carpets, zinc sheets, textiles, polyester yarn, RMGs, juices, pulses and agricultural products.

Policy and Connectivity Initiatives

India has taken long strides in terms of initiatives to improve connectivity between the North East and her neighbouring countries. The measures include some policy measures as well. The figure below captures the major initiatives taken by the Government of India so far:

Figure 2: Policy and Connectivity initiatives adopted by India for better regional integration of NER

Policy initiatives

- NER remains the key connection between India and Myanmar and is considered as a gateway to the ASEAN and larger East Asian market
- Look East Policy of 1990 that subsequently became Act Est Policy in 2014
- Major bilateral as well as plurilateral partnerships with Bangladesh, Bhutan and Nepal

Major Connectivity initiatives

- Substantial investment in road networks connecting NER with the rest of India and its immediate neigbours: NER Vision 2020 and XIth Five Year Plan emphasise need for expansion, maintenance and improvement of the road network to provide the essential basis for trade and economic development.
- Three emerging economic corridors which include India-Myanmar-Thailand Trilateral Highway and Kaladan Multi Modal Project
- 15 new railway projects of 1,385 kms of length to be executed with a budget of Rs 47, 000 crore
- A new airport terminal being constructed at Agartala airport. AAI is also committed to invest another Rs 2500 crore in North East in the next three years
- In inland waterways, cargo movement in Pandu-Dhubri route already flagged off. Five bridges to be constructed on NW-2



FOOD PROCESSING

2. FOOD PROCESSING

With diverse soil and climatic conditions, India is home to a variety of agricultural and horticultural produce. The total production of horticultural crops in 2017-18 was around 305.4 million –16 per cent higher than the previous year. With this large production capability, India remains the second largest producer of horticultural crops in the world. However, the sector suffers from high wastage of surplus production leading to financial losses for the producers. Hence, food processing emerges as a sustainable alternative in countering the incidence of high wastage in the Indian agriculture .

Additionally, this sector provides significant employment opportunities and has tremendous export potential. The percentage of the population directly dependent on agriculture in the region varies between 44 per cent in the state of Tripura to as high as 62 per cent in the state of Nagaland. Indirectly, agriculture provides employment to a much larger population in the region. During FY 2016, India's exports of processed food and related products (inclusive of animal products) grew at a compound annual growth rate (CAGR) of 11.74 per cent, reaching US$16.2bn.

As per Agricultural and Processed Food Products Export Development Authority (APEDA), seasonality and availability of produce in significant volume, price competitiveness and quality are some of the major factors that contribute towards the development of food processing industry in India. Given this scenario, food processing has been termed as one of the 'Sunrise Sectors' of India.

Like the rest of India, NER is also majorly agrarian. Agriculture constitutes of 26 per cent of the total GDP of NER[6] and is one of the major contributors to the economy of NER, engaging one-third of the total work force in the region. Presence of diverse agro-climatic conditions within the region makes it a fertile ground for production of variety of agricultural crops including oranges, pineapples, kiwi, ginger, turmeric and chilli. However, the region suffers from lack of adequate storage and processing facilities, thereby leading to substantial wastage and loss of revenue for farmers.

6 *https://ageconsearch.umn.edu/bitstream/204687/2/02-Pratap%20S%20Birthal.pdf*

Table 3: Number of Food Processing Units in NER

State	Number of factories	Number of people employed
Arunachal Pradesh	28	1375
Assam	1317	87970
Manipur	23	536
Meghalaya	19	868
Nagaland	20	267
Tripura	75	1998
Sikkim	18	1670

Source: http://mofpi.nic.in/sites/default/files/asi_state_wise_2014-15.pdf

Given this background, potential food processing value chain with Bangladesh can go a long way towards the development of the agricultural sector of the region. In fact not only Bangladesh, such cross-border value chains can also be forged with Bhutan and Nepal. A brief on the food processing industry of each of the three countries along with their current trade linkages with India and role in food processing value chain is given below.

Bangladesh

The industry valued at US$2.2bn is considered as one of the fastest growing in Bangladesh with several private players and significant investment opportunities.[7] Major sub-sectors include processing of fruits, vegetables, dairy products, sugar and rice. Juices, jams, jellies and pickles remain the most popular items of food processing industry in the country.

At the same time, while Bangladesh is majorly agrarian, it is heavily dependent on food imports to cater to its large population. Bangladesh is already one of the largest importers of Indian produce with imports reaching US$145.83mn in 2016-17. [8]

Given the combination of a growing food processing industry and increasing import dependency Bangladesh can be definitely considered as one of the most important export destination for NER's agricultural produce.

Bhutan

Bhutan has a growing fruit processing industry. At present, there are four major companies[9] involved in producing fruit juices, fruit-based drinks, jams, sauces and pickles. These products are largely exported, Bangladesh and India being major markets. At the same time, the industry depends on imports for raw materials like fruit concentrates and pulp mainly from India for processing.[10]

The major items of processed fruit export from Bhutan to India, Bangladesh and Nepal include

7. *http://katalyst.com.bd/wp-content/uploads/2017/01/Roles-and-Opportunities-for-Private-Sector-in-Agro-food-Processing Industry-of-Bangladesh.pdf*
8. *http://apeda.gov.in/apedawebsite/trade_promotion/ReportsTradeEvents/BSM_report06_04_2018.pdf*
9. *http://saarctpn.qualicus.com/pubs/saarctpnpubs/Juice/FINAL_VC_JuiceBhutan.pdf*
10. *"Why are growers unable to tap the raw material demand of the local agro-industries?", Department of Agricultural Marketing & Cooperatives, Royal Government of Bhutan, April 2017*

Table 4: Export of Fruits and Vegetables from India to Bangladesh (in US$mn)

Exported to Bangladesh	2015-16	2016-17
Other fresh Fruits (except mango and grapes)	29.96	38.54
Other fresh vegetables	7.58	19.12
Other Processed Fruits & Vegetables (except mango and grapes)	1.76	3.58
Dried & Preserved Vegetables	0.52	1.09

Source: http://apeda.gov.in/apedawebsite/trade_promotion/ReportsTradeEvents/BSM_report06_04_2018.pdf

mandarin, mango, apple and mixed juices. India also remains a major import destination for fruit concentrates and pulps to cater to Bhutan's fruit processing industry. Therefore, a value chain between NER and Bhutan is possible whereby NER can send their fruit produce to Bhutan for further processing. The final products can then be sold in Bhutan, Bangladesh, India and Nepal and can even be exported to Myanmar. It is to be noted here that Bhutan has recently gained comparative advantage in production of organic crops.

Nepal

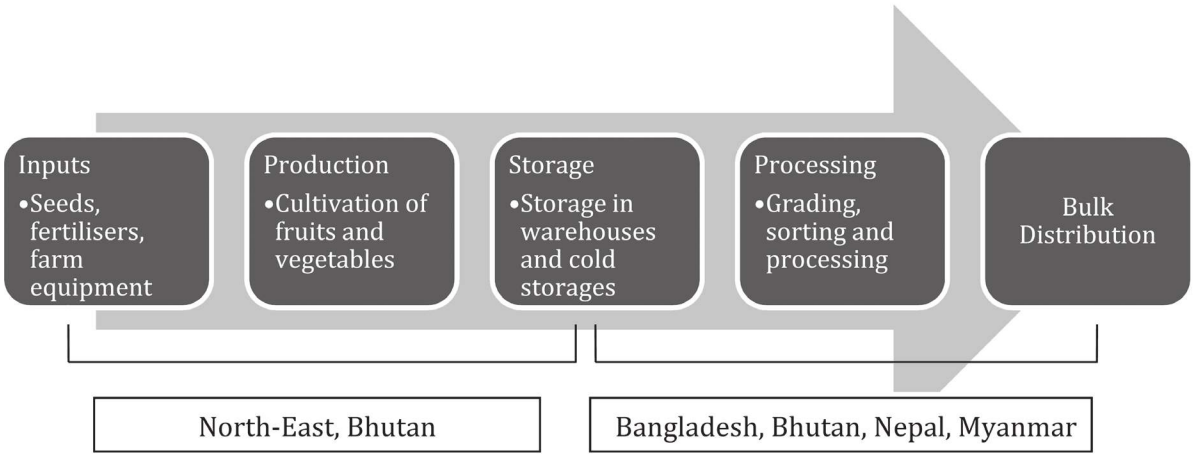
Nepal also has a developing agro-processing sector with large number of farms in bakery, dairy processing, sugar processing, fruit juice and spices. It is interesting to note that while manufacturing sector has been on a decline in the country, agro processing has seen steady growth. At the time of the last manufacturing survey in 2011, the food and beverage sub-sector was the single largest manufacturing sub-sector, in terms of both number of firms (26.3 per cent of total) and value-added (34 per cent).[11] While sales of most agro-processing firms are mostly domestic, some are involved in exports to India and Bangladesh market. Given this background, Nepal also has potential to forge cross-border value chains with India.

Myanmar

The agro-based food processing industry in Myanmar accounts for almost 70 per cent of the total number of industries.[12] This sector is also the largest employment generator in the country. The industry, however, mostly comprises small scale or family-based firms. Rice mills, bean processing and oil meals are the largest employment generators within the industry.

The tentative food processing value chain with India, Bangladesh, Bhutan, Nepal and Myanmar's participation is shown below for reference.

11. *https://set.odi.org/wp-content/uploads/2017/10/3.-SET-Nepal-Agro-processing-for-ET_Oct-2017.pdf*
12. *http://www.isis.org.my/files/2012/Myanmar/5_UYeMinAung.pdf*



All four countries also play crucial role in forward linkages of this value chain. With the new multi-modal connectivity initiatives, finished products can be sent to the entire SAARC market. Also access to ports of Myanmar implies access to the ASEAN and the Far East Asian markets.

Challenges

While the above discussions show tremendous potential for cross-border value chain in agro processing, there are specific challenges that need to be addressed in order to successfully implement it. Few of the challenges are highlighted below.

• *Problem of aggregation and presence of large number of middlemen*

Like the rest of India, most of the agricultural producers in NER are small scale. Therefore, they may need assistance of aggregators to transport the aggregated produce to nearest markets or even for export. However, presence of these middle-men makes the supply chain less efficient, thereby leading to a rise in the price of the produce making it less competitive in the market.

• *Lack of adequate storage facilities leading to problems in transportation*

Often agricultural produce may need to be transported from remote areas in NER. Due to lack of proper cold storages on the way, significant amount of the produce may get wasted thereby lowering the value of the total consignment. The trucks are often also not adequately designed to carry perishable agricultural products.

• *Difficulty in transporting goods through different LCS in the region*

There are certain restrictions on import of agricultural produce from India to Bangladesh via the Agartala-Akhaura LCS which is one of the most easily accessible and commonly used LCS in the region. While recently the Bangladesh government has withdrawn this restriction on 27 products, there has been no proper notification at the LCS in order to make it operational on the ground. Hence, both exporters and importers are confused as to which products can be transported through that LCS. Such lack of clarification on trade rules and regulations may significantly hamper formation of cross-border value chains between two countries.

What can be done?

• *Encouraging formation of cooperatives and SHGs among farmers*

The government must promote a cluster-based approach through formation of cooperatives and SHGs among farmers. They should be provided financial assistance to scale up operation and arrange for their own aggregation and transportation. This will bring down the number of middle-men significantly and thus lower the price of the agricultural produce.

• *Adequate storage facilities*

The government must encourage investment in adequate storage facilities along the major routes connecting different NER states and Bangladesh, Nepal and Bhutan.This will reduce wastage. The Mega Food Park Scheme is a good example in this context wherein government provides a maximum of Rs 10 crores for building integrated cold chain and preservation infrastructure to private entities, cooperatives and SHGs.

• *Clarity in the rules governing all the LCS*

There should be clarity as to which products can be transported to Bangladesh via different LCS. Both governments should work towards removing such restrictions (mostly non-tariff in nature) that may hamper formation of cross-border value chains.



MEDICAL TOURISM

3. MEDICAL TOURISM

India remains one of the preferred medical tourist destinations in the world. In 2016, nearly 4.27 lakh foreign tourists arrived in India for medical purpose, a significant increase over the figure in 2015 (2.3 lakhs).[13] Niti Aayog, a government think tank, has identified medical value travel as one of the major drivers of growth and source of forex earning. India's neighbouring countries have been a major source of medical tourists for India, Bangladesh being on the top with 1.8 lakhs medical tourists in 2016.

Apart from Bangladesh, a significant number of medical tourists also visit from Nepal and Bhutan for speciality healthcare services. Table 5 briefly states the number of people visiting India from Bangladesh, Bhutan, Nepal and Myanmar for medical purposes. The data shows that there has been a steady increase in the number of medical tourists from all countries considered for this study barring Bhutan.

Table 5: Medical Tourists Coming to India in 2014 vis-à-vis 2016

Country of origin	2014	2016
Bangladesh	66922	179453
Bhutan	576	0
Nepal	127	1450
Myanmar	1257	1644

Source: Compiled by authors from Indian Tourism Statistics, 2014 and 2017 available at http://tourism.gov.in/market-research-and-statistics

13 *http://164.100.47.194/Loksabha/Questions/QResult15.aspx?qref=65533&lsno=16*

A combination of several factors has worked towards making India's medical tourism sector successful. These include quality healthcare. Entry of large corporates in the medical tourism sector has fuelled technological advancement and innovation. Increase in number of medical institutions and nurse training centres have guaranteed supply of skilled manpower.

Additionally, India remains one of the most cost effective medical tourism destinations in the world when compared to other such hubs, including Thailand, Singapore and Malaysia (KPMG-FICCI, 2014). The government has also taken several initiatives to promote medical value travel in the country. Notable among them introduction of Medical Visas (M-Visa), launching of web portal by Ministry of Commerce to provide key information to medical tourists in India and a 24x7 helplines in all major international languages introduced by the Ministry of Tourism to guide medical tourists during their stay in India.

Potential for NER as a Medical Hub

Owing to its long international border, NER is very well positioned to attract several medical tourists from Bangladesh, Bhutan, Myanmar and Nepal. The chief factors that encourage medical tourism in the region include:

Affordability

- Proximity to countries, such as Bangladesh, Myanmar, Bhutanand Nepal
- Low cost of transportation
- Low cost of treatment for medical tourists

Familiarity

- NER shares linguistic and cultural relations with Bangladesh, Myanmar, Bhutan and Nepal.
- As a result, medical tourists may feel more comfortable in recieving treatment due to this familiarity

Guwahati is gradually gaining significance in this aspect. With increasing private investment, Guwahati has witnessed tremendous improvement in its private healthcare facilities in the last few years. Due to its location and cultural advantages and good air and road connectivity, the city has already started attracting medical tourists from neighbouring Bangladesh.

However, while Guwahati has been a success, healthcare facilities in rest of the NER are inadequate for servicing even the local population. There are certain issues that need to be addressed before developing the region as a medical tourism hub. The Annual Report (2016-17) of Ministry of Health and Family Welfare identifies following issues as deterrent for development of medical tourism in NER.

a. Shortage of trained manpower

NER suffers from shortage of trained doctors and pharmacists. Moreover, while states such as Meghalaya, Nagaland and Manipur have substantial reserve of trained nurses, the data vary for other NER states (Table 5). The Table further shows that while, the percentage of nurses in the NER states is above the national average, same is not the case for the number of doctors and pharmacists. The doctor-nurse ratio in the NER states is also less than the all India figure.

Table 6: Composition of Health Workers in NER (in percentage)

States	Doctors	Nurses	Pharmacists	Doctor-Nurse ratio
Arunachal Pradesh	12.0	40.9	09.2	0.3
Assam	27.1	37.1	15.7	0.7
Manipur	21.0	40.6	13.1	0.5
Meghalaya	18.0	52.0	09.3	0.3
Mizoram	07.8	20.2	02.0	0.4
Nagaland	13.0	52.5	17.1	0.2
Tripura	29.9	26.5	13.0	1.1
Sikkim	10.2	30.5	01.9	0.3
All India	39.6	30.5	11.2	1.3

Source: www.who.int/hrh/resources/16058health_workforce_India.pdf

• ***Accessibility due to difficult terrain and poor connectivity***

The difficult hilly terrain of the region makes many places inaccessible or difficult to reach for patients as well as medical delivery teams. Lack of proper connectivity between NER states renders quality medical service inaccessible to patients staying in remote areas.

• ***Improvement in the quality of healthcare services***

There are only a very few National Accreditation Board for Testing and Calibration Laboratories (NABL) or National Accreditation Board for Hospitals and Healthcare Providers (NABH) accredited hospitals in the region. As per the list of accredited hospitals in the NABH website, out of 700 accredited private hospitals in India (including hospitals and small healthcare organisations) only four are from Assam and one is from Nagaland.[14]

What needs to be done?

• ***Ensuring quality healthcare at affordable prices***

More private investment needs to be encouraged in the region for improving the quality of healthcare services and fuelling technological innovation. Additionally, most of the medical tourists from developing countries look for healthcare facilities specialising in surgery and other critical diseases, such as cancer. Therefore, investment should be encouraged in such kinds of facilities to promote medical tourism in the region.

• ***Ensuring better connectivity with the neighbours***

While Guwahati enjoys good air connectivity with other NER states and neighbouring countries, including Bangladesh and Bhutan, better air and road connectivity initiatives need to be adopted to improve connectivity within other state capitals and neighbouring countries.

14 *www.nabh.co/frmViewAccreditedHosp.aspx*

• ***Facilitating medical tourists***

Introduction of medical visas has gone a long way in developing medical tourism industry in the country. More measures should be taken to facilitate easy visa processing for medical tourists from neighbouring countries. Medical tourists from Bangladesh, Bhutan and Myanmar crossing through land ports may be given visa on arrival for better facilitation. Also government can think of providing consular services in NER to medical tourists from Bangladesh, Bhutan and Myanmar.

• ***Facilitating financial transactions for medical tourists***

It has been noticed that difficulty in payment of fees and other financial transaction from countries of origin act as a major barrier towards development of the medical tourism industry and encourages informal payment in healthcare sectors. Therefore, strengthening coordination between banking networks of India, Bangladesh, Bhutan, Myanmar and Nepal is essential. The state capitals in NER can have branches of banks of Bangladesh, Bhutan and Myanmar for facilitating payments.[15]

• ***Promoting medical and wellness tourism as a package***

With sprawling tea gardens and beautiful scenic beauty, NER can also be promoted for wellness tourism. The government can think of offering health and wellness tourism as package to medical tourists from neighbouring countries.

15. https://blogs.economictimes.indiatimes.com/et-commentary/making-northeast-medical-tourism-hub-for-the-region/



HIGHER EDUCATION HUB

4. HIGHER EDUCATION HUB

While India remains one of the major source of foreign students for developed countries, including US and UK, the country has gradually started becoming the preferred destination for foreign students from developing countries, especially SAARC region. As per All India Higher Education Survey (2017-18), 25 per cent of foreign students in India are from Nepal, 4.8 from Bhutan and 4 per cent from Bangladesh.

It is also observed that most students prefer India to pursue their undergraduate courses. Expansion of private educational institutions throughout the country coupled with public private partnerships (PPPs), regional university partnerships and distance education programmes have gone long way in promoting the country as an education and knowledge hub among its neighbours.

The government has also taken steps to internationalise higher education in the country.

The recently launched 'Study in India' programme[16] is directed towards make India an education hub for foreign students; improve the soft power of India with focus on neighbouring countries and use it as a tool in diplomacy; rapidly increase the inflow of inbound International students in India through a systematic brand-building, marketing, social media and digital marketing campaigns; increase India's market share of global education exports; improvement in overall quality of higher education; reduce the export-import imbalance in the number of international students; growth in India's global market share of International students; and increase in global ranking of India etc.

Potential for NER as a Higher Education Hub

While NER has made significant improvement in its primary education, there is huge scope for improvements in secondary and higher education in the region. The region has several advantages to be developed as a higher education hub for students from Bangladesh, Bhutan, Nepal and Myanmar.

16. *http://pib.nic.in/newsite/PrintRelease.aspx?relid=180896*

The major determinants of the advantage include:

Proximity to Bangladesh, Bhutan and Myanmar

Large English speaking population

Cultual and linguistic familiarity with the neighbouring countries

Despite these advantages, the region suffers from lack of adequate education infrastructure. The current infrastructure is not even adequate to cater to the growing demand for higher education even within the region. For instance, in terms of college density (colleges per lakh population), all NER states are below the national average of 28 barring Manipur.

Lack of quality education is another factor that affects the region. In several instances, the curriculum may be out-dated, not at par with the requirement of current industries. Moreover, there is a lack of qualified and experienced teaching staff. The manpower requirement in the region as per the latest Ministry of Human Resources Development's (MHRD) All India Higher Education Survey is given below:

Table 7: Manpower Requirement in Teaching Institutes in NER

State	Number of Universities	Number of colleges	Manpower required
Assam	4	474	35
Arunachal Pradesh	1	15	1
Manipur	1	75	6
Meghalaya	1	68	5
Mizoram	2	36	3
Nagaland	1	52	4
Tripura	1	32	3

Source: http://mhrd.gov.in/sites/upload_files/mhrd/files/statistics/AISHE2017-18_0.pdf

Recent surveys in higher education have shown that many students from neighbouring countries seeking education in India prefer professional courses and diplomas, such as engineering, medical and management. BTech is one of the most sought after courses followed by BBA, Pharma, BCA and Nursing.

Table 8: Specialisation–wise Number of Students Coming to India from Neigbouring Countries

	PHD	M Phil	Post Graduate	Undergraduate	P G Diploma	Diploma
Nepal	50	0	1357	9191	15	799
Bhutan	18	0	101	1693	4	76
Bangladesh	38	1	205	1285	6	9
Myanmar	61	16	98	83	6	28

Source: http://mhrd.gov.in/sites/upload_files/mhrd/files/statistics/AISHE2017-18_0.pdf

However, NER has only few reputed institutes offering a selection of such courses. As per a Federation of Indian Chambers of Commerce & Industry (FICCI) report, the total number of national institutes offering professional courses (which include IIT Guwahati, IIM Shillong, 8 NITs and IIITs) in the region caters to merely 0.2 per cent of the youth population of the region itself.[17]

The courses offered in many of the institutes in the region often do not cater to the current industry needs. This leaves a significant percentage of students jobless after completion of their degrees. The unemployment rates in the NER states are higher than the national average barring Meghalaya and Mizoram.

Furthermore, even in the existing educational institutes (both government and private), there is an acute lack of modernised infrastructure which deters these institutes from adopting new courses.

What needs to be done?

Improving the quality of education especially technical education in the region

In NER, many colleges are not NAAC-accredited. Even those which are accredited are ranked poor due to a combination of factors, which include quality of curriculum, poor teacher-student ratio, etc. Due to their poor accreditation they often do not get sufficient grants from UGC for upgradation of their infrastructure.

More number of certified engineering colleges and technical institutes preferably under PPPs need to be opened in all the NER states.

The infrastructure in the existing colleges and universities should be developed so that they can accommodate a variety of courses in their curriculum.

17. *http://ficci.in/spdocument/23005/FICCI-event-Report_final.pdf*

The existing colleges and universities should be encouraged to sign MoUs with leading international education providers such that they can learn and emulate international best practices.

Curriculum more suited to the industry needs

To convert degrees and diplomas successfully into jobs, there is a need to match the curriculum with the industry requirements not only within NER region but also for neighbouring countries. For instance, since textile industry is a significant employment generator in Bangladesh, institutes specialising in garment designs, fashion and agricultural technology should be encouraged to open their branches in NER. Similarly, given the importance of services industry in the entire SAARC regions, engineering, management and technical institutes should also be promoted throughout the North East.

Leveraging ICT for reaching maximum number of students

Digital mediums can be leveraged by top NER colleges and universities to reach maximum number of students from the neighbouring areas.



CONCLUSION

5. CONCLUSION

The NER is gradually gaining grounds in the foreign policy of India largely due to the following reasons.

- As the western markets become saturated in terms of trade, India's focus is shifting towards the South East Asian and East Asian markets and NER is acting as a gateway to forge India's partnerships with these regions; and
- Furthermore, NER is gaining strategic importance due to the growing presence of China in the Indo-Pacific region. Therefore, development of North East has become essential for prosperity of the entire nation.

With abundant natural resources and educated young population, North East has tremendous scopes in forging such value chains with its immediate neighbours, including Bangladesh, Bhutan, Myanmar and Nepal. Such value chains have the capability to generate employment and add value to the state domestic products. Moreover, they also go a long way towards developing industry in the region and adopting various global standards and best practices.

Successful participation in RVCs can ultimately equip the region to even participate in GVCs as has been the case of several South East Asian nations, including Vietnam and Thailand. Food processing, medical tourism and education are very important in these aspects and can attract significant foreign investment too, if properly developed.

Therefore, policies must be directed towards encouraging such cross-border value chains and address them successfully so that it not only boosts the economic gains of the region but also improves the standard of life and lead to overall growth and development.

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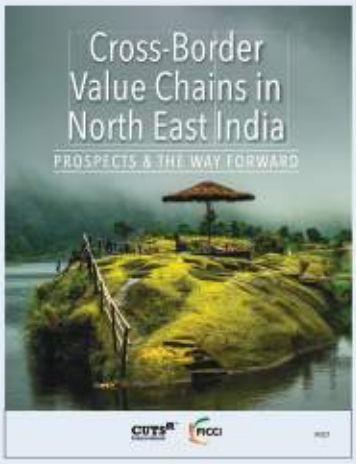
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