

Exports from Uttar Pradesh: ---

Trends, Opportunities and ---

Policy Perspectives ---

Occasional Paper No. 185



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EXPORTS FROM UTTAR PRADESH: TRENDS, OPPORTUNITIES AND POLICY PERSPECTIVES

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EXECUTIVE SUMMARY

Uttar Pradesh (UP) has been a confluence of cultures, religions, and businesses over the last many decades. UP happens to be the fourth largest State of India, spread over an area of roughly 246,000 sq km, equal to about 7.3 per cent of India's total land area. Interestingly, the State with 200 million people is equivalent to the population of Brazil, and an economy the size of Qatar, which has a population of 2.4 million, roughly the same as Bijnore, one of the districts of UP.

Uttar Pradesh also ranks third in terms of Gross State Domestic Product (GSDP) in the country. However, the State accounts for less than 5 per cent share in India's exports – significantly lower as compared to its contribution to other key macroeconomic parameters – underlining the need for UP to focus on promoting its exports. Increasing exports would not only boost the economic activity but also create more employment and augment the competitiveness of enterprises from the State, thereby creating a virtuous cycle.

KEY ECONOMIC ACTIVITIES

The GSDP of Uttar Pradesh (at constant 2011-12 prices) registered a

growth of 7.4 per cent in 2016-17 to reach Rs. 9,67,517 crore, reflecting a steady economic progress in the State. The State's contribution to India's GDP has remained stable at around 7.9 per cent on an average during the last three years (2014-15 to 2016-17). The average annual growth in the State's GDP during this period was 6.0 per cent, compared to the all India GDP growth of 6.9 per cent.

Uttar Pradesh is the largest producer of food grains in India and accounted for about 17.8 per cent share of the country's total food grain output in 2016-17. The State has been amongst the highest producer of food grains in India since the 1950s due to high-yielding varieties of seed, greater availability of fertilizers and increased use of irrigation. Food grain production in the State in 2016-17 stood at 49.1 million tonnes. The State also accounted for 11.1 per cent of India's fruit production and 14.8 per cent of the country's vegetable production.

There is also a robust policy environment for development of industrial infrastructure in the State. The Uttar Pradesh State Industrial Development Corporation and the

Department of Infrastructure and Industrial Development serve as the nodal agencies for this purpose. The key enablers for companies to set up manufacturing unit in the State include access to a large consumer market (population of nearly 200 million accounting for 16 per cent of India's total consumer base) and proximity to raw material sources. Yet, the share of secondary sector in the State declined from 26.7 per cent to 24.1 per cent, during 2011-12 to 2016-17.

An analysis of the Gross Value Added (GVA) by the secondary sector in the State indicates that the maximum value addition is by the manufacturing sector, followed closely by construction sector. The secondary sector in Uttar Pradesh is dominated by Micro, Small and Medium Enterprises (MSME). The State has a number of locally specialised business clusters such as sports items in Meerut, brassware in Moradabad, perfumes in Kannauj, leather in Kanpur, shoes in Agra, embroidered sarees in Varanasi, carpets in Bhadohi, Chikan work in Lucknow, among others. Most MSME units are concentrated in the more developed Western part of the State. Areas such as the Central and Bundelkhand region have scope for higher level of investments by MSMEs, especially in the handloom, handicrafts and powerloom sectors.

The significance of the tertiary sector in the economic structure of

Uttar Pradesh has been gradually increasing. The sector has been contributing the maximum share in the GVA of the State – rising from 45.6 per cent in 2011-12 to 50.8 per cent in 2016-17. There has been growth across all segments such as trade and tourism, transport, financial services, communications, real estate, public administration and other services. The factors leading to this rapid rise include increasing purchasing power, rising social mobility and digital penetration in rural markets, all of which have caused a spurt in demand for the services sector in the State. Foreign companies have been outsourcing to enterprises incorporated in the State in the area of business services and information technology services, further giving an impetus to the tertiary sector.

EXPORT POTENTIAL

The multitude of resource endowments, coupled with diverse production and value addition networks, provides UP with the opportunity to contribute significantly to the country's exports. During 2016-17, Uttar Pradesh ranked 5th among all States by value of exports. The State was ranked 6th till 2014-15, but after carving out the new State of Telangana from Andhra Pradesh, the State improved its rank to 5th in the country in terms of value of exports. Merchandise exports from the State amounted to USD 12.53 Billion during 2016-17, up from

USD 10.94 Billion in 2012-13. The exports from the State grew at annual average growth rate of 4.1 per cent, which was one of the fastest among the top exporting States of the country.

A product-wise analysis of exports from the State reveals that the buffalo meat sector contributes a significant share, followed by precious metal jewellery and leather footwear. The share of buffalo meat was 12.8 per cent in 2012-13, which increased to 16.6 per cent in 2014-15, before moderating to 14.9 per cent in 2016-17. Readymade garments of manmade fibres was the only segment which has witnessed a consistent and secular increase in its share in the State's exports during the period 2012-13 to 2016-17. In fact, its share in exports of UP surpassed that of readymade garments of cotton for the first time in 2016-17.

The State exports majorly to the USA, the UAE and the UK. Recently, the share of exports to Vietnam has also risen, primarily driven by growing exports of buffalo meat. The USA and the UAE have continued to account for the biggest shares, which have further risen during the period 2012-13 to 2016-17, subjecting the State's exports to higher concentration risk, especially given the slew of protectionist measures implemented recently in the USA.

Animals and animal products, leather and leather products, construction

material, gems and jewellery and textiles and garments have been identified as sectors with the maximum potential for exports from Uttar Pradesh, not only because the State has comparative advantage in exports of these products but also because the global import demand for these products has remained robust.

The Government can also improve the quantum of exports by increasing manufacturing capabilities and improving competitiveness in the categories of machinery and mechanical appliance; electrical and electronic goods; optical, measuring, medical and similar instruments and parts; and pharmaceutical products.

The Study attempts to quantify the untapped export potential that the State can channelize through key products. The products considered for export potential analysis accounted for more than three-fourth of the total exports of Uttar Pradesh in 2016. Together, these products had a share of 3.6 per cent in India's total exports in 2016. The export potential, actual exports, and untapped export potential for India in these product categories is calculated from the ITC database. The share of Uttar Pradesh in exports of comparable products categorised under Principal Commodity is calculated using DGCIS

data for 2016, and these shares are used to estimate the export potential at the State level. Based on this methodology, the untapped export potential of Uttar Pradesh in these identified sectors is estimated at USD 8.1 billion, nearly two-third the size of its current exports.

GENERIC AND INSTITUTIONAL STRATEGIES

Today, the global trade is highly unpredictable and dynamic, wherein various disruptions, competition and changing preferences can have both positive and negative impacts. In order to have a robust export strategy that transcends both domestic and international trade volatility, the industrial and economic infrastructure of the State must be revamped and modernized. The following measures can be considered by the State Government in formulation of an export strategy:

Infrastructure

Robust infrastructure will be critical for providing forward and backward linkages to exporting units. It will therefore be important to identify, create and promote logistics infrastructure which engenders exports. Whilst some of these are already present in UP, there is a need to streamline and significantly augment the prevailing infrastructure facilities. Since the State has considerable interest in the Delhi Mumbai

Industrial Corridor and the Amritsar Kolkata Industrial Corridor, these are expected to substantially upgrade the infrastructure facilities, and shall bode well for the exports sector. Additionally, the State can develop a multi-modal cold-chain network which shall involve two or more modes of transport for facilitating transportation and storage of perishable products. Investment in development of last mile connectivity can also serve as an objective for this proposed multi-modal network. Further, a strategic synergy between industrial infrastructure and export promotion bodies could help boost the export potential of the State.

Capacity Building and Skill Development

Exporters need to have in-depth knowledge of the latest global developments pertaining to international trade viz., export finance, insurance, packaging / eco-labelling, quality, etc. They should also acquaint themselves with the rules and procedures of importing countries. Hence, there is a need to conduct Workshops / Seminars / Conferences regularly on different aspects of international trade and across different sectors in the State. A focused approach by the policy makers towards encouraging consistent quality, and eco-friendly methods in production, through adoption of Quality Management System and Environment Management

System certification can give a competitive edge to the exporters. A comprehensive inter-ministerial network can be built with institutions such as Agricultural and Processed Food Products Export Development Authority, Export Promotion Councils, and India Trade Promotion Organization which would provide a holistic environment for technological upgradation and skill development.

From the perspective of skill development, State Universities can be encouraged to commence both vocational and research based courses in agro processing, biotechnology, application of information technology in agriculture and allied fields, etc. Efforts may also be taken to promote vocational courses for promotion of handicraft skills.

Export Awards

Currently, the State Export Award is given by the Government of Uttar Pradesh to outstanding exporters of the State across 25 sectors. In order to further encourage exporters and streamline the process, a consolidation of these 25 sectors into 10 broad sectors may be considered. Within these sectors, awards can be provided under different categories such as innovative product, new market, quality product, quality manufacturing process etc. depending on the idiosyncrasy of respective sectors. Such segregation could also be done based on parameters

like turnover (MSMEs, large units, grassroots business,) young promising companies, and women entrepreneurs.

The State Government can also initiate a 'Hidden Champions' initiative, to identify, encourage and felicitate promising small enterprises that have shown exemplary performance in exporting products through innovative practices. This can encourage innovation in the State economy. Under the Hidden Champions initiative, select companies could receive both financial and non-financial forms of assistance to incubate globally competitive SMEs.

Geographical Indications

Geographical Indications (GI) of goods are defined as that aspect of industrial property which is definite to a geographical territory. GI conveys an assurance of quality and distinctiveness which is essentially attributable to its origin in that defined geographical locality, region or country. GI tags, thus, can help in boosting exports and ensuring both economic and social returns. GIs are considered important tools for marketing strategies, and function as product differentiators. Uttar Pradesh boasts of more than twenty GI tags in sectors ranging from handicrafts, agriculture and manufacturing. In order for UP to reap the benefits of GI status, it is important for the GI brands to be recognized as reliable and

preferred brands in the market with distinguished positioning. Products such as Darjeeling Tea have been able to gain substantial market share on account of this brand building. In order to attain similar levels of success, key value proposition needs to be defined for the products having GI status in UP. The logo and name of the GI brand needs to be developed and marketed, and mechanism needs to be devised for ensuring that all the products marketed under the GI brand in UP meet the minimum specified standards. Initiatives are also needed for identifying more products from the State which can be accorded GI status. In this regard, a Brand Equity Fund can be setup by the State Government under the aegis of the Department of Industries. This will be aimed at building globally competitive brands for products manufactured / originating from the State.

Promoting E-commerce

Online opportunities in traditionally strong sectors such as apparel, gems and jewellery, handicrafts, carpets, etc. are yet to be tapped completely. While there are a significant number of fairs and exhibitions that the State artisans are exposed to, access through online platform is currently limited. An important step will be to create awareness among MSMEs regarding online market place and customer relationship management. Effective marketing communications

and brand building in this space will be essential in effectively utilizing the channel. Connecting MSMEs directly to their markets and customers can aid the players in adapting to the changing market dynamics quickly. Especially in sectors such as textile, weavers' cooperatives are losing their relevance in an industry that is dominated by machine-made fabric. Handloom products take longer to make, and are more expensive because of higher costs of labour and raw material (a large portion of which is natural, not synthetic). It is also difficult for rural cooperatives to gain access to lucrative urban and foreign markets. Among the biggest clients of handloom cooperatives are State Governments, which promote these products through government emporiums. However, lack of marketing initiatives, design and technical innovation and quality improvements mean a stagnant market and prices for these goods. Online marketplace for these products can substantially increase the reach of these products and fetch better prices for the producers.

Cluster Development

Industrial clusters have been proven to have several advantages in promoting the growth of a particular sector or industry. It is recognized that enterprises can achieve high levels of competitiveness if they work in a cluster environment which engenders

complementarities by providing common facilities, and facilitating collective activities including collective sourcing and marketing. The State of Uttar Pradesh has several industrial clusters spread across an array of sectors. The development and upgrading of clusters will be an important agenda for the State Government. As an essential first step, the State needs to develop a mechanism for assessment of existing clusters in the State. The assessment can cover aspects pertaining to infrastructure bottlenecks, technological upgradation, access to skilled human resource, environmental sustainability, etc. Suitable capacity building activities can then be undertaken by the Government. The elements of capacity building include construction of physical infrastructure, building institutions, development of human resources, etc. The State Government's recent One District-One Product (ODOP) initiative is an attempt towards this cluster development approach in the State.

Active Participation in Global Value Chains

The Global Value Chain (GVC) model breaks the product life-cycle into many tasks. The returns from the various stages of GVC can be represented as a curve called the GVC Smile Curve. The logic of the GVC smile shape is that research and developmental activities for critical components of the

large basket products (which basically refer to products which enjoy a large share in global imports), occur early in the production process. These knowledge activities tend to be high-value-added activities in GVCs and tend to require robust infrastructural and technical support. At the bottom point of the curve are the assembling activities reflecting low returns. The activities closest to the consumer are marketing, logistics, and after-product servicing that has higher returns than assembling, but not as high as innovation. The Uttar Pradesh Government can focus on developing production and export capabilities in large basket products, and focusing on the high value added segments of the value chain. An exports basket that comprises products that belong to the large basket have higher chances of growth. The large basket products that offer scope for innovation and growth for UP include products such as electronics, telecom, and high-end engineering products. The State can make an attempt to enhance its competitiveness in select products like machinery and mechanical appliances, and electrical and electronic goods, amongst others and enter the value chain for these products which have exhibited strong global import demand. This would ensure higher export revenues and a positive outlook for future growth in exports. Sectoral policy incentives to attract FDI in these sectors, especially

from countries which feature among the top source countries for India as a whole, but have relatively low levels of investment in UP, could be designed by the State Government.

SECTORAL STRATEGIES FOR SELECT SECTORS

Meat Processing

The highest exported product from Uttar Pradesh is buffalo meat. Buffalo meat is among the triad of interlinked industries — dairy, meat and leather. In order to realise its export potential, the State needs to focus its efforts on upgrading slaughter houses to modern abattoirs with all basic and minimum hygienic standards requirements. In the present context of WTO Agreement on the Application of Sanitary and Phytosanitary measures, the hygienic standards of existing meat plants need to be improved and made at par with the best in the world. Efforts may be taken to make Uttar Pradesh free of the foot and mouth disease, which can then help exports to grow manifold by opening up markets in the US, the EU and China. In this regard, while the 'Foot and Mouth Disease Control Programme' is already underway in several districts of Uttar Pradesh, its implementation needs to be made more exhaustive.

Dairy Industry

An integrated cooperative dairy development program on the proven

model of Anand can be replicated for achieving higher competitiveness by the State at the global level. The State has already provisioned Rs 15 crore for setting up a Dairy Development Fund. The fund can be utilised for marketing of value added products like flavoured milk, butter, cheese, dairy whiteners etc. The program can also focus on modernizing the quality control laboratories in various districts to ensure globally acceptable standards. Research and development emphasis should be on development of efficient milk value chain to boost trade. On the quality front, the State must strive to establish its image as a reliable and consistent supplier of safe and quality dairy products conforming to the international standards.

Handloom and Handicrafts Industry

The State needs to focus on skill upgradation, modernization of production process, design development and quality upgradation in this sector. Cluster development can reap significant benefits for the industry. Cluster development is better when the responsibility is given to the cluster members with a focus on enhancement of product design and delivery. The cluster may be further developed by establishing common facility centres or service centres to provide common services required by the handloom and handicrafts sector. This could include high capital-intensive manufacturing equipment

such as computerized quality control machine. Promotion of ICT based resources, and training the artisans in developing and marketing high end products using e-commerce, and integrating handloom and handicrafts emporiums with tourism circuits to ensure greater visibility and footfalls to the emporiums could be some promising initiatives for the sector.

Carpets

The key to meeting global demand will be adapting to the changing consumer needs and expectations with constant product diversification. The State can establish a design centre to coordinate the process of developing latest designs, patterns, bringing newer dyeing technologies, colour combinations etc. Establishment of more State-promoted institutes of Design can help meet design development needs of the local industry. State-of-the-art laboratory for quality testing will also be crucial for producing high quality products. Proper publicity of local carpets, especially the Bhadohi carpets which holds a GI status, and contesting of adverse publicity on the child labour issue will be essential for maintaining and enhancing the international repute of the carpets produced from the State. In addition, greater awareness can be created about compliance to social standards such as the "KALEEN" label which ensures that no child labour has been

used for the production of the carpet.

Agro Processing

Initiatives in the horticulture, agro processing and food processing industry could include encouraging Mega Food Parks (like the ones notified in Nalgonda and Nizamabad districts), establishing new agro-warehouses, strengthening supply chains through provision of refrigerated vehicles/containers at reasonable rates for transportation to airports / ports, setting up cold chains and incentivising cold chains run on renewable energy, ensuring uninterrupted power supply, creating of infrastructure facilities for degree/ diploma/ certificates courses, food processing skill development programs, food testing, and standardisation laboratories, and providing financial assistance to new food processing units. Branding can also be an effective strategy for promoting exports from the State. The branding of three species of Mangoes of Uttar Pradesh (Dusshari, Chausa and Langra) under the brand name of "Nawab", has already proven to be a successful strategy in international markets.

Leather Industry

In order to match up to the environmental regulations, the State requires urgent investment in effluent treatment plants to curb tannery pollution, and encourage research on cheap substitutes of substances such

as Azo Dyes and Pentachlorophenol, which have been banned due to their carcinogenic nature. It will also be important to ensure that the packaging material, along with the products must be reusable and recyclable.

The development of Depson T as a substitute for chrome tanning is a promising step in making the industry more environment friendly. Once the products can be manufactured in consonance with the environmental regulations, these products can be marketed as environment-friendly products, with hallmarks such as 'Eco-Labels', which would definitely enhance the appeal of the goods in the international market and help enter or expand in the untapped markets.

Tourism

In order to draw inflow of foreign tourists, Uttar Pradesh has an array of attractions to offer. Though the foreign tourist arrivals are currently focused around destinations such as Agra and Varanasi, efforts need to be undertaken in order to take tourism to regional and lesser explored destinations. The State tourism efforts must focus on popularizing specialised and niche tourism products that serves wide variety of tourists with different tastes and budgets, opens up new employment opportunities and incentivises the general public to conserve the natural flora and fauna of the State.

Initiatives like apps for tourists, digital marketing techniques and social media campaigns, announced in the Tourism Policy 2016, can support innovation and technological development in the tourism sector. These will be useful to inform and educate tourists on the uniqueness of the tourist destinations and available hospitality options, thereby enhancing the State's tourism attraction. To enhance its effectiveness, the app could be made available in foreign languages. Further, State-level awards instituted in the Tourism Policy 2016 can consider volume of foreign tourists catered as one of the assessment criteria for the various award categories.

IT and ITeS Sector

The strategies in the IT/ ITeS sector need to focus on facilitating all stages of IT/ITeS industry encompassing start-ups/entrepreneurs, MSMEs and large players by providing a conducive policy framework and appropriate fiscal and non-fiscal incentives. The Government of Uttar Pradesh should encourage establishment of centres of excellence in specialised fields like BigData, Cloud Computing etc. across the State to promote R&D, innovation and transfer of technology. The transfer of technology can be through prominent IT industry experts or in collaboration with leading institutions like IIM Lucknow, IIT

Kanpur, IIIT Allahabad, IIT-BHU, and other reputed institutions. The State can also establish Skill Development Centres on PPP model in the State to encourage youth from UP to improve their capabilities and enhance employability in the IT/ITeS domain. These centres can be established in collaboration with IT/ITeS companies and educational institutions.

The 'Plug n Play Model' based incubation centre facility launched in Ghaziabad and Lucknow under the IT UPVAN initiative, to encourage start-ups, and provide a conducive growth environment to them can also be expanded to other cities. Diversification of IT/ ITeS sector to more locations within the State can also reap rich dividends for the State economy.

CONCLUSION

India expects to increase its share in world merchandise exports. Contribution from various States would form the bedrock of achieving a higher share in global exports. In order to contribute towards the increase in share and fructify this vision, it will be essential for Uttar Pradesh to focus on enhancing trade competitiveness, promoting innovation, bolstering availability of export finance, and

strengthening the institutional capacity for exports, among others.

Uttar Pradesh is a large state with immense possibilities which can be harnessed through proactive steps and strategies of the State government. As identified in the Study, the State has an untapped export potential of more than USD 8 billion, which can be harnessed through appropriate short and medium term measures, some of which have been outlined above. In the short term, the Government can focus on increasing exports in the 'Product Champions' category, which are essentially the low hanging fruits. Over the medium term, enhancing competitiveness in other segments identified in the Study as 'Underachievers' through pragmatic and proactive strategy and support can bode well for the exports sector of UP.

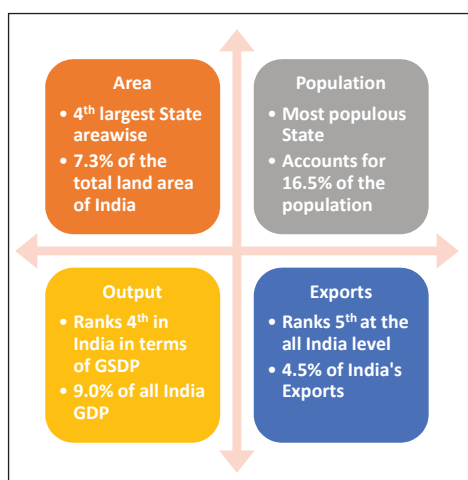
The strategies suggested in the Study, focusing on creating an enabling environment across sectors, as also for capacity building in identified sectors could help the State potentially reach exports of US\$ 30 billion by 2023 (next five years), thereby imparting a renewed energy and momentum to the export growth story of Uttar Pradesh.

1. INTRODUCTION: UTTAR PRADESH

Uttar Pradesh (UP) has been a confluence of cultures, religions, and businesses over the last many decades. UP happens to be the fourth largest State of India, spread over an area of roughly 95,000 square miles (246,000 sq km), equal to about 7.3 per cent of the total land area of India. Interestingly, the State with 200 million people is equivalent to the population of Brazil, and an economy the size of Qatar, which has a population of 2.4 million, roughly the same as Bijnore, one of the districts of UP. Uttar Pradesh also ranks fourth in terms of output (Gross State Domestic Product) in the country. However, the State accounts for less than 5 per cent share in India's exports – significantly lower as compared to the State's share in other key macroeconomic parameters – underlining the need for UP to focus on promoting exports from the State. Increasing exports would not only boost the economic activity but also create more employment and augment the competitiveness of enterprises from the State, thereby creating a virtuous cycle. Exhibit 1.1 puts this in perspective, depicting key metrics for the State alongside its current share in these attributes,

with a view to highlight the untapped export potential of UP.

Exhibit 1.1: Uttar Pradesh: Key Metrics



Source: Exim Bank Research

The State is landlocked and is surrounded by Bihar in the East; Madhya Pradesh in the South; Rajasthan, Delhi, Himachal Pradesh and Haryana in the West; and Uttarakhand in the North; and shares international border with Nepal. It enjoys good connectivity in terms of roads, railways and air to other parts of the country. Both the Eastern Dedicated Freight Corridor and the Delhi Mumbai Industrial Corridor criss-cross the State and meet near Dadri

in Uttar Pradesh. Other upcoming logistical enhancements are expected to accelerate development in the region. Metro rail network is also being developed in Lucknow and will be introduced in four more cities in the State.

PRIMARY SECTOR

Endowed with fertile land, a salubrious climate and perennial river system, UP has long been the granary of India. The State has the longest network of rivers and canals at 28,500 km, which foster the agriculture sector.

Uttar Pradesh also has strong demand for fertilisers on account of the high availability of acreage coupled with the large size of the State. Uttar Pradesh is the largest producer of food grains in India and accounted for about 17.8 per cent of the country's total food grain output in 2016-17. Food grain production in the State in 2016-17 stood at 49.1 million tonnes. Major food grains produced in the State include rice, wheat, maize, millet (bajra), gram, pea and lentils. With overall vegetable production of 26.40 million tonnes in 2016-17, the State of Uttar Pradesh was also the largest producer of vegetables in India. The State is also recognised as a major milk-producing State, accounting for around 20.6 per cent of the total milk produced in the country. During 2015-16, the State's milk

production was around 32.95 million tonnes, recording a CAGR of 6.3 per cent during the period from 2003-04 to 2015-16.

INFRASTRUCTURE, INDUSTRY AND TOURISM

UP has a well-developed traditional industry besides mineral based industry. UP is popularly known for its key traditional industries comprising handicrafts, leather goods, carpet, textiles, sugar, cotton yarn, jute, vegetable oil, glassware and bangles, etc. Given the affluence of agriculture, UP is now flexing its status to emerge as a preferred destination for the food-processing, cold storage and warehousing industries in the country. The State is also endowed with mineral resources such as limestone, dolomite, glass-sand, marble, bauxite, non-plastic fireclay and uranium.

The State is also one of the largest power producers in the country. As of, October 2017, Uttar Pradesh had a total installed power generation capacity of 24,365.90 megawatt (MW)¹. The State has good roadway infrastructure as well as telecommunication networks. The State has a tele density of 73.70 per cent and had a share of 14.6 per cent in wireless subscribers in India². Uttar Pradesh has the biggest railway network in the country with a railway density of 40 km per 1,000 sq km, which is double the rail density of

¹Central Electricity Authority

²Telecom Regulatory Authority of India, as of February 2017

India. Agriculture, cement, fertilisers, coal and manufacturing are the major sectors and industries served by the railways. In terms of aviation infrastructure, UP has six domestic airports, located at Agra, Allahabad, Gorakhpur, Kanpur, Lucknow and Varanasi. International flights operate from Chaudhary Charan Singh International Airport, Lucknow, and Lal Bahadur Shastri Airport, Varanasi. An international airport is also coming up at Jewar, Greater Noida.

The State has developed integrated industrial townships like Noida with State-of-the-art facilities. 'Udyogik Nivesh Avam Rozgar Protsahan Niti 2017' has been introduced to encourage industry and employment, and Rs 20 crore has been allocated for this purpose. In addition, Special Investment Board and Single Window Clearance mechanism is on the anvil to facilitate setting up of new businesses, and Rs 10 crore has been allocated for this purpose. Plans have been laid out for establishment of Start-up incubators in Lucknow at an expense of Rs 5 crore³. Noida Export Zone enjoys a good inflow of investment from many domestic and international players. In addition to industrial areas, many centres like Kanpur, Ghaziabad and Lucknow have an established traditional industry. The large livestock

population has allowed the leather industry to flourish in the State. Kanpur and Agra have emerged as the hubs for leather goods in the country. Textile industry is another promising sector in the State. Uttar Pradesh is also the fourth largest exporter of software from the country. The State Budget 2016-17 has also allocated funds for establishing Electronic Manufacturing Clusters (EMC) along the Yamuna Expressway⁴. Prospective investors for the EMC include leading electronic companies like LAVA International Limited, Spars Technologies, TUV Rheinland, Daki Electronics, Spice Global, PGEL etc. Owing to the richness in the availability of raw materials like limestone and other minerals, the State is home to 13 large cement plants with a cumulative capacity of 7.2 million tonnes in 2014-15⁵.

In the 2017-18 budget, the State Government allocated Rs 71 crore to connect district headquarters with four lane roads, Rs 288 crore for construction of four new metro rail projects and Rs 3972 crore for the upkeep of State roads. The State Government also allocated funds for establishing and widening the "Core Road Network" of important roads in the State. In June 2017, the Central Government approved road projects for the construction and upgradation

³Uttar Pradesh State Budget 2017-18

⁴Yamuna Expressway Industrial Development Authority (YEIDA) handed over the allotment letter for a 100-acre Greenfield EMC to Uttar Pradesh Electronic Corporation Limited (UPECL).

⁵Indian Bureau of Mines

of various roads across the State. The projects include upgradation of 73 State Highways into National Highways with a total length of 6,260 km, and many other proposals

Uttar Pradesh has also remained a favoured tourist destination in India due to the location of Taj Mahal, in Agra, besides being home to the historical city of Varanasi. In 2016, 3.2 million foreign tourists visited the State. Uttar Pradesh is planning to introduce nine more circuits to boost tourism in the State⁶. The World Bank recently committed USD 40 million (about Rs 260 crore) for the development of tourism facilities in Uttar Pradesh under the UP Pro-Poor Tourism Development Project. The five-year programme is worth approximately USD 57.14 million, of which USD 40 million will be financed by the World Bank, and the remaining amount will be funded out of State Budget. The programme is aimed at increasing tourism-related benefits for local communities in targeted destinations.

COMPETITIVENESS OF UTTAR PRADESH

The Mint-Institute for Competitiveness Study on India's Most Competitive States⁷ analyses the hard and soft infrastructure and the regulatory and policy framework. The former

encompasses everything from the existence of and access to markets to the availability of power and the presence of a talent pool that can be tapped, while the latter deals with issues such as land, tax and other aspects of doing business. Other factors such as clustering, intent of the State's political leadership are also considered.

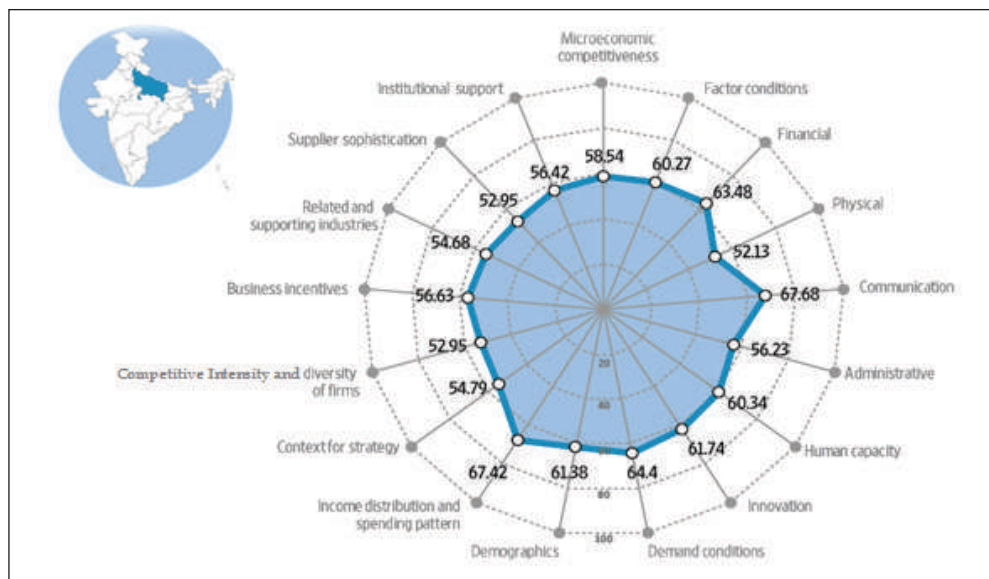
Uttar Pradesh has exhibited strong demand and factor conditions, resulting from tremendous demographics and income distribution as well as strong supporting industries (Exhibit 1.2). The State has performed fairly well on certain competitiveness indicators such as communication and income spending, while there is scope of further improvement in other areas like supplier sophistication and physical infrastructure.

On the innovation index prepared by Institute for competitiveness as well Uttar Pradesh is doing well. Uttar Pradesh already has a large number of MSME clusters and a significant number of R&D labs. Further enhancement of innovation potential will help the State remain competitive in the world market and boost exports.

⁶This includes the Mahabharata circuit, the Krishna circuit, Jain circuit, Sufi circuit, Freedom Struggle circuit, Kanwar circuit, Craft circuit, Cuisine circuit and Culture circuits.

⁷Based on an adaptation of Michael Porter's methodology for assessing the competitiveness of nations.

Exhibit 1.2: Competitiveness of Uttar Pradesh (Scores out of 100)



Source: State Competitiveness Report, 2016, Institute for Competitiveness

EASE OF DOING BUSINESS

The Ease of Doing Business rankings form part of the Business Reforms Action Plan (BRAP) released by the Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce and Industry to increase transparency and efficiency of the regulatory functions and services for business in India.

Currently, as a part of BRAP, there are 372 parameters regarding reforms on 58 regulatory processes, policies and practices spanning 10 reform areas viz. access to information and transparency enablers; single window; environmental registration enablers; obtaining electricity connection; availability of land; construction permit

enablers; inspection reform enablers; labour regulation enablers; online tax and return filing; and commercial dispute resolution enablers spanning the lifecycle of a typical business.

Uttar Pradesh has implemented 46 reforms, but is yet to implement 326 reforms. The top five reforms include access to information and transparency enabler single window, availability of land, construction permit enablers, and environment registration enablers.

Uttar Pradesh ranked 10th among Indian States according to Ease of Doing Business ranking by DIPP in 2015. The State slid to the 14th position in the Ease of Doing Business ranking

of 2016. Uttar Pradesh was placed in the 'aspiring leaders' category by DIPP in 2016, with 70 per cent - 90 per cent implementation of reforms in the areas broadly categorised under construction permit, environmental and labour registration, obtaining electricity connection, online tax-return filing, inspection reform, access to information and transparency, single window, land availability and commercial dispute resolution.

Set against this backdrop, the current Study examines the export

performance of Uttar Pradesh at a granular level and makes an attempt to map this with the global demand. In doing so, the Study analyses the potential for exports from the State and identifies dynamic products and markets where exporters from the State could focus to yield greater benefits. Based on a detailed analysis of exports coupled with examining the current challenges faced by the exporters from the State, the Study suggests certain broad strategies that could potentially help the State improve its share in India's exports.

2. MACROECONOMIC PROFILE

Gross State Domestic Product (GSDP) is an important indicator to measure the growth and economic development in a State, and gauge the changes in the economy. It is equal to the income generated by the production of goods and services within the geographical boundaries of a State. The estimates of value added without any adjustments for the capital depreciation/ consumption is termed as Gross Value Added (GVA)⁸.

The GSDP of Uttar Pradesh at constant (2011-12) prices registered

a growth of 7.4 per cent in 2016-17 to reach Rs. 967,517 crore, reflecting a steady economic progress in the State. As observed in Table 2.1, the State's contribution to India's GDP has remained stable at around 7.9 per cent on an average during the last three years (2014-15 to 2016-17). In fact, 2016-17 was the only year where growth of State's GDP was higher than the national average. The average annual growth rate of the State during this period which was 6.0 per cent compared to the All India GDP growth of 6.9 per cent.

Table 2.1: GDP of Uttar Pradesh and India (Factor Cost at 2011-12 Prices): A Comparison (Rs Crore)

Year	GSDP of Uttar Pradesh	GSDP Growth (%)	GDP of India	GDP Growth (%)	Share of UP in India's GDP (%)
2012-13	758205	4.7	9213017	5.5	8.2
2013-14	802070	5.8	9801370	6.4	8.2
2014-15	834432	4.0	10536984	7.5	7.9
2015-16	901257	8.0	11381002	8.0	7.9
2016-17	967517	7.4	12189854	7.1	7.9
Avg. Growth (2012-13 to 2016-17)	-	6.0	-	6.9	

Source: MOSPI; Exim Bank Research

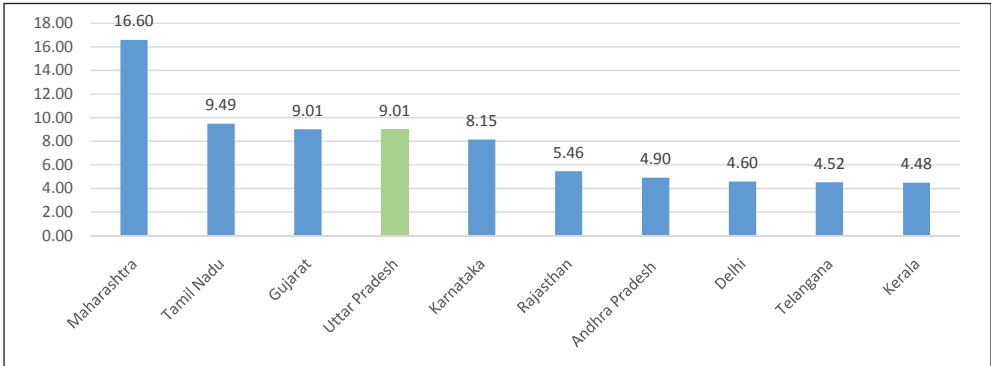
⁸Central Statistical Organisation

A comparison of GSDP across various States of India reveals that UP with a GDP of Rs. 9.01 trillion stood fourth in 2015-16, the latest year for which data is available across all States (Exhibit 2.1). Maharashtra, Tamil Nadu and Gujarat led the ranking during the year.

A drill-down of the economic structure of UP reveals that the tertiary sector dominates in terms of contribution to the GVA. The GVA at constant (2011-12) prices for UP was estimated at Rs. 8.32 trillion in 2015-16, of which services sector accounted for the largest share of 50.0 per cent (Table 2.2). A cause of concern has been the

declining contribution of the secondary sector in the State's GVA – from 26.6 per cent in 2011-12 to 24.7 per cent in 2015-16. Within the secondary sector, the share of manufacturing has remained at about 12 per cent of the GVA, which is comparatively lower than the share of manufacturing in India's GVA, which stood at about 17 per cent during this period (Exhibit 2.2). This underscores the need for improvement in the productivity and value addition of the secondary sector, in particular the manufacturing sector of the State in order to make it more competitive, and enhancing its capacity to export.

**Exhibit 2.1: Top States of India in Terms of GSDP
(Constant Prices; Rs. Trillion; 2015-16)**



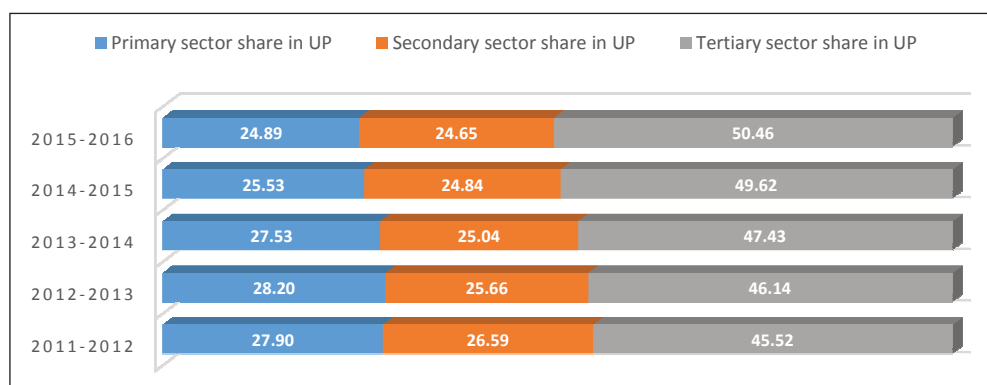
Source: MOSPI, Exim Bank Research

Table 2.2: Comparison of Sector-wise Gross State Value Added (GSVA) of UP vis-à-vis Gross Value Added (GVA) of India at Constant (2011-12) Prices

Year	Uttar Pradesh (GSVA) in Rs. trillion				India (GVA) in Rs. trillion			
	Primary	Secondary	Tertiary	Total	Primary	Secondary	Tertiary	Total
2011-12	1.9	1.8	3.1	6.8	17.6	23.7	39.7	81.1
2012-13	2.0	1.8	3.3	7.1	17.8	24.7	42.9	85.5
2013-14	2.0	1.9	3.5	7.4	18.6	26.0	46.3	90.8
2014-15	2.0	2.0	3.9	7.8	18.8	27.4	51.2	97.3
2015-16	2.1	2.1	4.2	8.3	19.2	29.4	55.8	104.4
CAGR	2.1%	3.1%	7.8%	5.1%	2.1%	5.5%	8.9%	6.5%

Source: Annual Plan 2016-17, Planning Department, Govt. of Uttar Pradesh; Exim Bank Research.

Exhibit 2.2: Change in Sectoral Share of Gross Value Added in Key Sectors of Uttar Pradesh (in %)



Source: Annual Plan 2016-17, Planning Department, Govt. of Uttar Pradesh; Exim Bank Research

A further granular level analysis of economic activity of UP shows that shares of segments like Agriculture, Forestry and Fishing in the Primary sector and Construction in the

Secondary sector have declined. As against this, most of the segments under the Tertiary sector witnessed an increase in their contribution to the State's GDP (Table 2.3).

Table 2.3: GSDP by Economic Activity at Constant (2011-12) Prices (Rs. Crore)

ECONOMIC ACTIVITY	2011-12	2015-16	2011-12	2015-16
	VALUE (Rs. Cr)		SHARE	
Primary	190429	207154	26.4%	23.3%
Agriculture , Forestry and Fishing	183893	196636	25.5%	22.1%
Mining and Quarrying	6535	10518	0.9%	1.2%
Secondary	181473	205188	25.2%	23.1%
Manufacturing	87636	106422	12.1%	12.0%
Electricity, Gas ,Water Supply & Other Utility Services	9382	12549	1.3%	1.4%
Construction	84456	86217	11.7%	9.7%
Tertiary	310692	420022	43.1%	47.3%
Trade and Hotel & Restaurant	69458	92722	9.6%	10.4%
Transport, Storage & Communication	40481	67118	5.6%	7.6%
Financial Services	25182	30564	3.5%	3.4%
Real Estate, Ownership of Dwellings, Professional Services	97464	130072	13.5%	14.6%
Public Administration	42811	57032	5.9%	6.4%
Other Services	35296	42514	4.9%	4.8%
GVA (as basic prices)	682594	832363	--	--
Product Taxes	70173	93631	--	--
Product Subsidies	31370	37873	--	--
GSDP (at Mkt Prices)	721396	888121	100.0%	100.0%

Source: Annual Plan 2016-17, Planning Department, Govt. of Uttar Pradesh; Exim Bank Research

RESOURCE PROFILING

This section examines the resource endowments of UP with a view to highlight key areas where it has competitive advantage. This can help in identification of the latent export potential in the State and devising strategies for improving competitiveness, enhancing productivity, increasing exports, thereby raising income of the State.

Agriculture

Identification of agro-climatic zones is an essential first step towards development of strategies for increasing agricultural production. Major crops such as paddy, wheat, sugarcane, cotton and soyabean

are suited for several of the agro-climatic zones present in UP. The Government of Uttar Pradesh has been implementing various schemes for fruits, vegetables, flowers, spices, medicinal and aromatic plants, along with other activities like bee-keeping, mushroom production, food processing and cultivation of betel-vine. The State is divided into nine zones. The detailed zone-wise crop profiling is presented in Table 2.4.

Thirteen districts fall in two agro-climatic zones and the rest 62 districts are covered in single zones under the National Agricultural Research Project (NARP) launched by the Indian Council of Agricultural Research.

Table 2.4: Agro-Climatic Zones in Uttar Pradesh and Cropping Pattern

S. No.	Agro Climatic Zone	District	Suitable Crops
1	Tarai and Bhabar	Saharanpur, Muzaffarnagar, Bijnor, Moradabad, Rampur, Bareilly, Pilibhit, Shahjahanpur, Khiri Bahraich Shrivasti	Paddy, Wheat, Sugarcane, Groundnut, Cotton
2	Western Plain	Saharanpur, Muzaffarnagar, Meerut, Baghpat, Gaziabad, Gautam Budha Nagar, Bulandshahar, Hapur	Paddy, Bajra, Maize, Wheat, Sugarcane, Cotton
3	Mid-Western Plain	Bareilly, Badaun, Pilibhit, Moradabad, Jyotiba Phule Nagar, Rampur, Bijnor, Sambhal, Shamli	Soyabean, Rapeseed, Chilly, Pepper
4	South Western Dry Plain	Agra, Firozabad, Aligarh, Hathras, Mathura, Mainpuri, Etah	Paddy, Arhar, Potato, Bajra, Maize, Cotton, Rapeseed
5	Central Plain	Shahjahanpur, Kanpur Nagar, Kanpur Dehat, Etawa, Auraiya, Farrukhabad, Kannauj, Lucknow, Unnao, Raibareilly, Sitapur, Hardoi, Khir Fetehpur, Allahabad, Kaushambi	Paddy, Bajra, Maize, Wheat, Arhar, Rapeseed

S. No.	Agro Climatic Zone	District	Suitable Crops
6	Bundelkhund	Jhansi, Lalitpur, Jalaun, Hamirpur, Mahoba, Banda, Chitrkoot	Paddy, Maize, Wheat, Barley, Gram, Linseed, Cotton, Soyabean
7	North Eastern Plain	Gorakhpur, Maharajganj, Deoria, Kushi Nagar, Basti, St. Kabir Nagar, Siddhartha Nagar, Gonda, Bahraich Balrampur, Shravasti	Paddy, Wheat, Sugarcane, Turmeric, Rapeseed
8	Eastern Plain	Azamgarh, Mau, Balia, Pratapgarh, Faizabad, Ambedkar Nagar, Barabanki, Sultanpur, Varanasi, Chandauli, Jaunpur, Gazipur, St. Ravidas Nagar	Paddy, Maize, Wheat, Arhar, Gram, Barley
9	Vindhyan	Allahabad, St. Ravidas Nagar, Mirzapur, Sonbhadra	Maize, Ragi, Linseed

Source: Annual Plan 2016-17 - Planning Department, Govt. of Uttar Pradesh

Mineral Resources

Mineral resources are of paramount importance in industrial activities. They enter the production cycle of several industries in the form of raw materials and help build major manufactured products, facilitating the development of an economy. Uttar Pradesh currently has vast tracts of under-tapped and untapped mineral resources. Major minerals found in the State include

andalusite and calcite in Sonbhadra and Mirzapur district; bauxite in Banda, Varanasi and Lalitpur districts; china clay and dolomite in Banda and Sonbhadra districts; feldspar in Jhansi district; fireclay, limestone, potash and sillimanite in Sonbhadra district; ochre in Chitrakoot district; granite in Banda, Lalitpur and Mahoba districts; iron ore (hematite) and rock phosphate in Lalitpur district (Table 2.5).

Table 2.5: Mineral Resources of Uttar Pradesh (as on 01.04.2015)

Mineral	Unit	Locality	District	Remaining Resources	Total Resources	Uses
Andalusite	000' tonnes	Salaidih-Harwariya	Sonbhadra, Mirzapur	24200	24200	Furnaces, Kilns and other industrial processes
Bauxite	000' tonnes	Rajauan	Chitrakoot, Lalitpur, Banda	18908	18908	Aluminium, Refractory Industry
Calcite	tonne	Kakri, Bina, Dhughichua, Kharia	Sonbhadra	11000	11000	Thermal Power, Cement, Ceramics

Mineral	Unit	Locality	District	Remaining Resources	Total Resources	Uses
China clay	000' tonnes	Naudiha, Ramgarh, Garda	Sonbhadra, Banda	25065	25065	Ceramics, Refractory Industry
Diaspore	tonne	Garhmau, Mailar, Gaurari, Tori	Jhansi, Mahoba, Lalitpur	284175	2630251	Refractory, Ceramics, Talc, Insecticide
Dolomite	000' tonnes	Bari	Sonbhadra	82352	82352	Iron & Steel Industry
Feldspar	tonne	Khajraha-Buzurg	Jhansi	200000	200000	Ceramics
Fire clay	000' tonnes		Sonbhadra	3221	3221	Polished slab & tiles
Granite (Dimen. Stone)	000' cubic metre	Kalapahar, Khailar, Kewal, Bijoli	Jhansi, Mahoba, Lalitpur, Banda, Sonbhadra	494819	494819	Polished slab & tiles
Iron ore (Haematite)	000' tonnes	Girar	Lalitpur	38000	58000	Cement & Steel Industry
Limestone	000' tonnes	Bhalua, Kajrahat, Billi, Ghurma	Sonbhadra	414878	427727	Cement & Steel Industry
Ochre	tonne		Chitrakoot	70000	70000	Refractory Industry

Source: Directorate of Geology and Mining, Uttar Pradesh

Human Capital

Uttar Pradesh has a reasonably good human capital base to leverage the bountiful natural resources in the State. The State has several institutions of higher education offering basic, specialised, and research-focused courses. A comparison of State Educational Indicators with the National Indicators (Year 2015-16) is done in Table 2.6. The State Government proposes to increase the

number of educational institutions in the State, a detailed list of which is mentioned in Table 2.7. As is evident from the following table, there are many indicators in which the State lags the country. These include the net enrolment ratio, teacher-pupil ratio, dropouts, transition rate from primary to upper primary, retention rate and literacy rate. Thus, there is a lot of scope for the State to improve on these parameters.

Table 2.6: Basic School Level Education Indicators of Uttar Pradesh (2015 -16)

S.No	Indicators	UP	India
1.	Gross Enrolment Ratio	107.66	106.63
2.	Net Enrolment Ratio	86.95	92.44
3.	Teacher Pupil Ratio	1:35	1:31
4.	Dropout (Primary)	6.74%	4.67%
5.	Transition Rate from Primary to Upper Primary	80.94%	89.58%
6.	Retention Rate	79.27%	82.38%
7.	Student Classroom Ratio	27	30
8.	Literacy		
	Male	79.24%	82.14%
	Female	59.56%	65.46%
	Total	69.72%	74.04%

Source: Annual Plan 2016-17, Planning Department, Govt. of Uttar Pradesh; Exim Bank Research

Table 2.7: Expansion of Higher Education in Uttar Pradesh during 2010-11 to 2015-16

S.No.	Educational Institutions	Status as in 2010-2011	Status as in 2015-2016
1	No. of Universities		
1 A	State Universities	13	14 (2 Proposed)
1B	Open University	01	01
1C	Private Universities	16	22
1D	Deemed University	01	01
2	No. of Degree Colleges		
2A	Government Degree Colleges	137	138
2B	Government Aided Private Degree Colleges	331	331
2C	Self-Financed Private Degree Colleges	3085	4689
2D	Coeducational Degree Colleges	3012	4274
2E	Girls Degree Colleges	541	884
3	Student Enrolment in Degree Colleges		
3A	Boys	1405864	2475206
3B	Girls	1067265	2261179
3C	Total (excluding enrolments in central, private, technical and medical)	2473129	4736385
4	No. of Teachers in Degree colleges [Govt. and aided]	15567	15847

Source: Annual Plan 2016-17, Planning Department, Govt. of Uttar Pradesh; Exim Bank Research

3. ECONOMIC STRUCTURE OF THE STATE

This Chapter gives an overview of the structure of UP's economy by analysing the performance of the primary, secondary and tertiary sectors. Abundant resources coupled with government initiatives provide ample opportunities for investments across all these three sectors of the State's economy. Such investments can not only serve the domestic market, but more importantly, can catalyse significant exports from UP helping it to emerge as one of the top exporting States of the country.

PRIMARY SECTOR

Agriculture Sector

Uttar Pradesh is an agro-based State. Agriculture occupies an important

place in the State economy employing 73 per cent of the labour force. Land ownership in the State is characterized by small and fragmented holdings. As per the Agricultural census of 2011, 79.5 per cent of the total holdings are less than 1.0 ha. Sizeable part of the irrigated and non-irrigated holdings owned by small and marginal farmers, in particular, is faced with diminishing productivity levels due to inadequate management of land and water resources. Paddy and wheat are the most important crops of the State. Maximum area is being used for cultivation of food grains of which only 11.7 per cent is covered under pulses. Approximately 77.7 per cent of the gross cropped area is used for the production of food grains.

Table 3.1: Production of Select Food Grains and Horticultural Products in Uttar Pradesh and India in 2016-17

Crop	Production in India (in Million Tonnes)	Production in UP (in Million Tonnes)	Share of UP (in per cent)
Wheat	98.4	30.1	30.6%
Rice	110.2	13.0	11.8%
Fruit	92.9	10.4	11.1%
Vegetables	178.2	26.4	14.8%

Crop	Production in India (in Million Tonnes)	Production in UP (in Million Tonnes)	Share of UP (in per cent)
Flowers	2.4	0.1	5.0%
Spices	8.1	0.2	2.8%
Onion	22.4	0.4	1.9%
Potato	48.6	13.9	28.5%
Food Grains ⁹	275.7	49.1	17.8%

Source: Department of Agriculture and Cooperation, Ministry of Agriculture and Farmers' Welfare; Exim Bank Research

Uttar Pradesh is the largest producer of food grains in India and accounted for about 17.8 per cent share of the country's total food grain output in 2016-17. Food grain production in the State in 2016-17 stood at 49.1 million tonnes. The State also accounted for 11.1 per cent of India's fruit production and 14.8 per cent of the country's vegetable production. The cropping pattern in various agro-climatic zones and agro-economic regions in the State is diverse.

Uttar Pradesh is the largest producer of wheat in India with a share of about 30.6 per cent in the country's overall

wheat production. Wheat production in the State reached 30.1 million tonnes during 2016-17.

The State has been amongst the highest producer of food grains in India since the 1950s due to high-yielding varieties of seed, greater availability of fertilizers and increased use of irrigation. Western Uttar Pradesh is more advanced in terms of agriculture as compared to the other regions in the State. Major food grains produced in the State include rice, wheat, maize, millet (bajra), gram, pea and lentils. Other important crops grown in the State are sugarcane, mustard, and gram.

⁹denotes data from 4th Advance Estimates of production of foodgrains

Table 3.2: Contribution of U.P. in Food Basket of Country

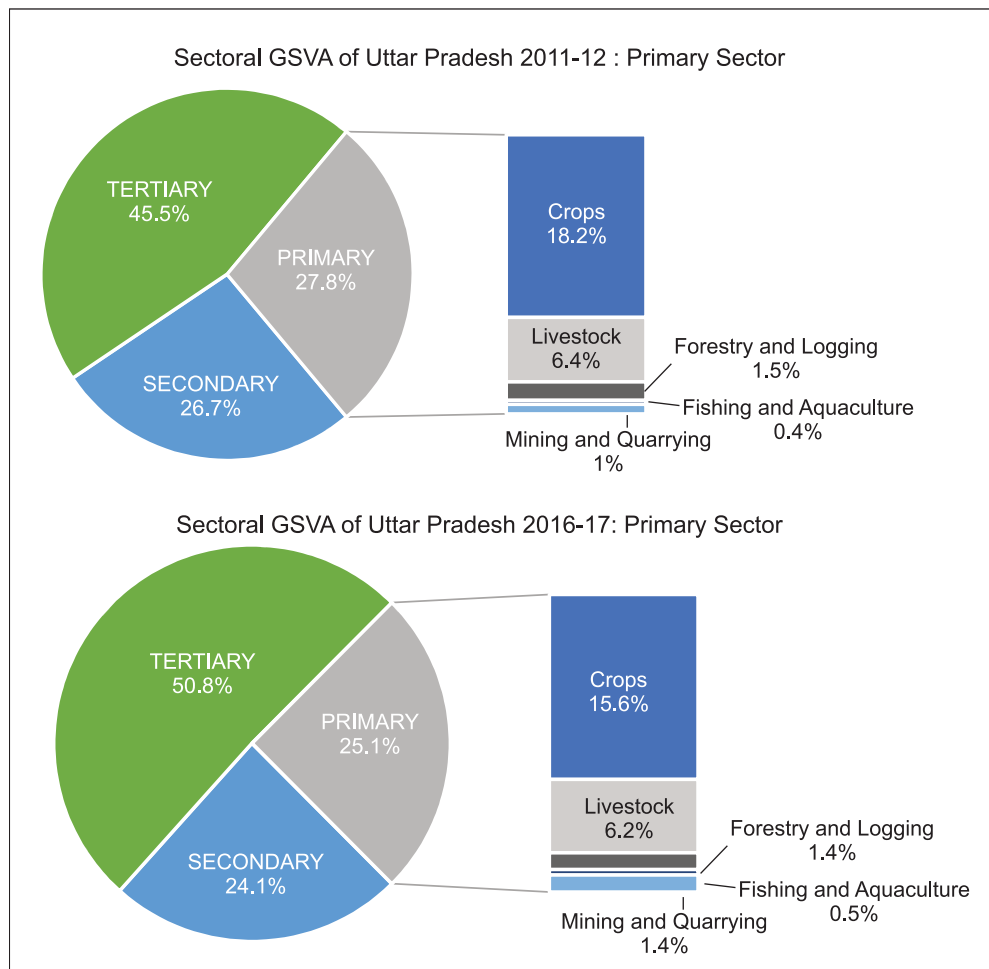
Name of Crops	Production in 2015 -16 (in MT)		Share of U.P during 2015-16 (in per cent)	Production in 2014-15 (in MT)		Share of U.P during 2014-15 (In per cent)
	India	UP		India	UP	
Total Food Grain	252.22	44.01	17.45	252.02	39.59	15.71
Rice	104.32	12.51	11.99	105.48	12.17	11.54
Wheat	93.50	26.87	28.74	86.53	22.42	25.91
Coarse Cereals	37.94	3.41	8.99	42.86	3.57	8.33
Jowar	4.41	0.11	2.38	5.45	0.16	2.99
Bajra	8.06	1.78	22.03	9.18	1.81	19.69
Maize	21.81	1.26	5.76	24.17	1.28	5.29
Total Pulses	16.47	1.22	7.40	17.15	1.44	8.39
Gram	7.17	0.22	3.01	7.33	0.37	5.02
Tur (Arhar)	2.46	0.18	7.44	2.81	0.17	6.20
Total Oilseeds	25.30	0.86	3.41	27.51	0.79	2.86
Groundnut	6.77	0.07	0.96	7.40	0.08	1.14
Rapeseed/ Mustard	6.82	0.60	8.83	6.28	0.58	9.27
Sunflower	0.33	0.01	1.51	0.43	0.00	0.92
Sugarcane	352.16	145.39	41.28	362.33	133.06	36.72

Source: Directorate of Economics and Statistics, DAC&FW

One of the ways of improving rural income and employment in the State is through diversification towards value added products in the agriculture, horticulture, food processing and

other allied sectors. The robust performance of agriculture and allied sector is expected, given that Uttar Pradesh has a cost advantage and favourable geographical conditions.

Exhibit 3.1: Sectoral Contribution to GSVA of Uttar Pradesh: Primary Sector

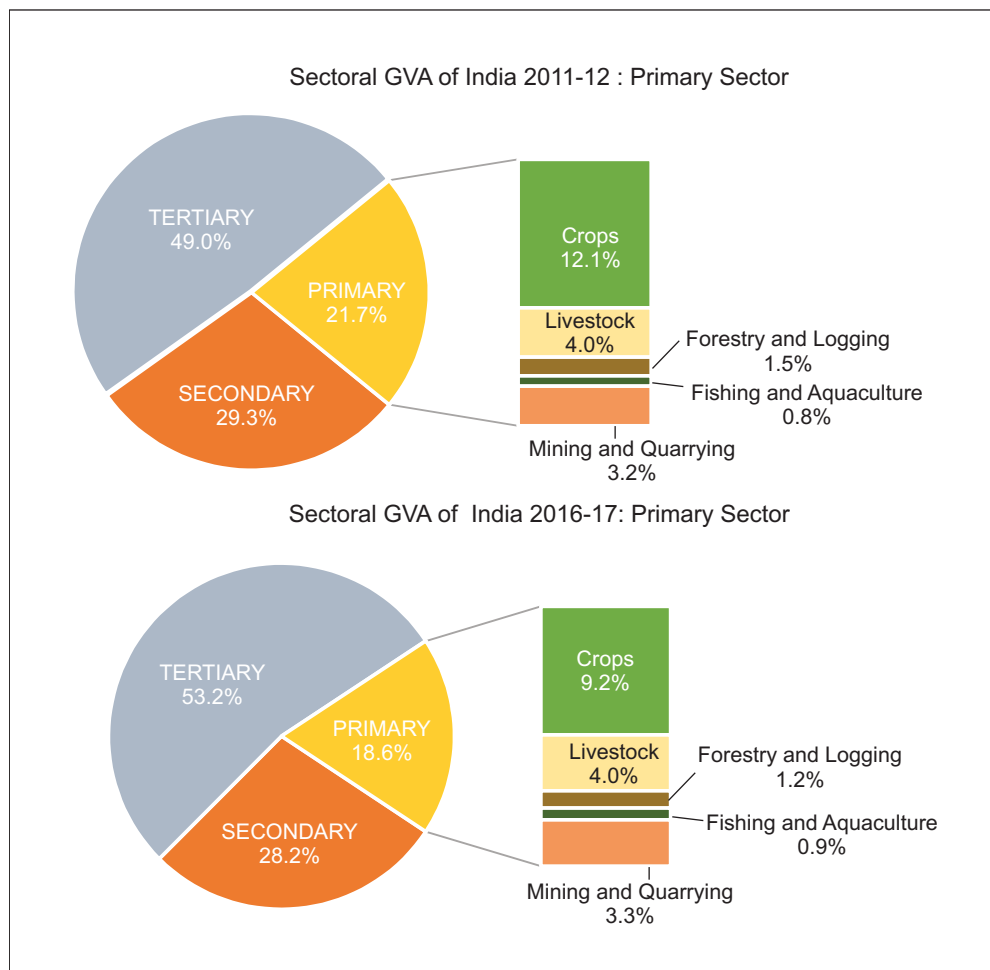


Source: CSO; Exim Bank Research

Exhibit 3.1 highlights how the contribution of the Primary sector to the GVA has changed in Uttar Pradesh during the period between 2011-12 and 2016-17. The overall share of Primary sector in the State's GVA fell from 27.8 per cent in 2011-12 to 25.1 per cent in 2016-17. The Secondary Sector also registered a fall of more than 2 percentage points, while the Tertiary Sector grew by over 5 percentage points during this period. This exhibit presents the

comparison of sectoral contribution to GSVA of Uttar Pradesh by the various components of the primary sector in year 2011-12 and 2016-17. Crops contributed the maximum to the value addition in primary sector in both these years, but their contribution came down to 15.6 per cent in 2016-17, compared to 18.2 per cent in 2011-12. The other components of the Primary Sector in UP showed no perceptible changes.

Exhibit 3.2: Sectoral Contribution to GVA of India: Primary Sector



Source: CSO; Exim Bank Research

As is evident in Exhibit 3.2, the contribution of Primary sector to India's GVA during 2011-12 and 2016-17 has witnessed a similar trend as that of UP. The share of Primary sector has gone down from 21.7 per cent to 18.6 per cent during this time, mainly due to fall in value added of the crops segment which declined from 12.1 per cent in 2011-12 to 9.2 per cent in 2016-17. The share of Secondary sector in

India's GVA fell marginally, from 29.3 per cent to 28.2 per cent, while that of the Tertiary sector increased from 49.0 per cent to 53.2 per cent during this period.

Crop-wise Productivity

High productivity of various crops is desirable in order to achieve the targets of food grain production and ensuring surplus for exports. Also,

since it is used as a raw material for food processing, it is important to have improvement in productivity levels. As seen in Table 3.3, the productivity levels have improved implying a robust supply of raw materials for the exports from the primary sector.

As is evident in Table 3.3, all major crops grown in the State witnessed an improvement in productivity. Productivity of cereals rose from 28.08 quintal per hectare in 2013-14 to 33.56

quintal per hectare in 2015-16. During 2013-14 to 2015-16, productivity of pulses and oilseeds rose from 6.50 to 11.97 quintal per hectare and 7.49 to 11.52 quintal per hectare, respectively. The State Government's initiatives with respect to scientific farming techniques (Krishi Vigyan Kendras), availability of funds in a timely manner, soil testing facilities, use of organic manure and crop insurance can perhaps be cited as reasons that led to the increase in productivity.

Table 3.3: Crop Productivity in Uttar Pradesh (in Quintals per Hectare)

Season	Crops	2013-14	2014-15	2015-16
Kharif	Rice	24.46	22.67	28.41
	Jowar	10.51	9.91	12.58
	Bajra	20.33	19.00	20.32
	Maize	18.37	17.78	20.15
	Small Millets	8.01	7.57	8.76
	Kharif Cereals	23.11	21.50	25.95
	Urd	4.46	5.36	9.19
	Moong	3.21	3.20	10.99
	Til (Pure)	1.47	1.97	3.00
	Ground Nut	8.93	8.64	13.85
	Soyabean	5.76	7.17	17.23
	Sunflower	7.81	17.11	29.39
Rabi	Wheat	32.01	20.37	39.59
	Barley	28.80	16.90	27.97
	Gram	4.60	3.13	12.78
	Pea	9.92	7.55	16.92
	Lentil	6.91	5.37	11.05
	Pigeon pea	9.03	6.07	12.39
	Rapeseed/ Mustard (Pure)	1.14	7.77	15.77
Grand Total	Cereals	28.08	20.82	33.56
	Pulses	6.50	5.36	11.97
	Food Grains	25.61	19.01	30.91
	Oilseed (Pure)	7.49	6.13	11.52

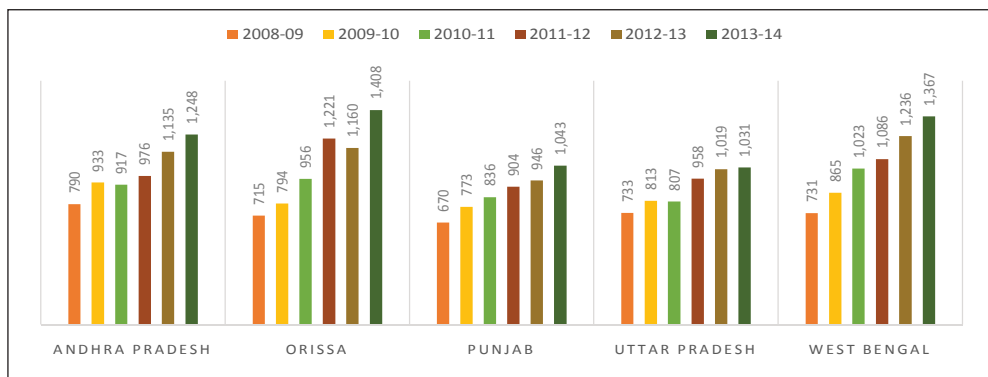
Source: Directorate of Economics and Statistics, Govt. of Uttar Pradesh; Exim Bank Research

Cost of Production

The cost of production of crops shows that UP has a competitive advantage in terms of producing crops at a lower cost. As depicted in Exhibit 3.3 to Exhibit 3.6, Uttar Pradesh has been producing major crops like sugarcane, maize and paddy with considerable cost advantage compared to other States consistently from 2009 to 2014. The State enjoys the cost advantage due to better soil fertility, irrigation facilities and focussed Government schemes for agriculture.

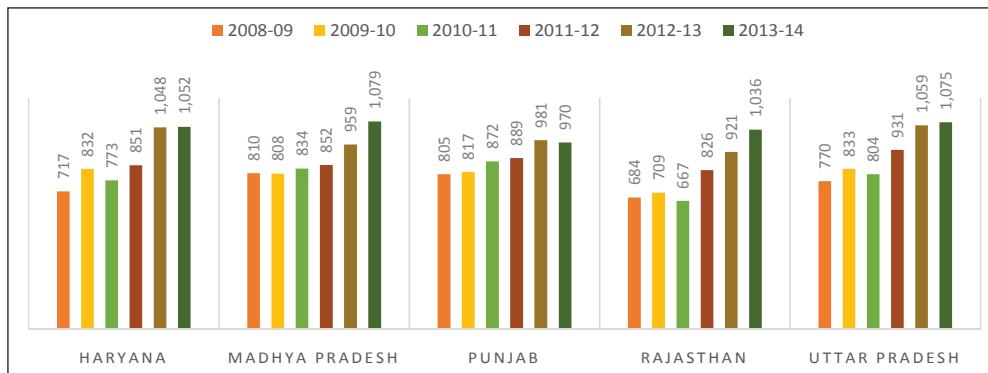
Paddy is a staple not just in India but in many countries across the globe. Uttar Pradesh has been consistently producing paddy at lower cost per quintal than other paddy growing States. This puts the State at a comparative advantage for production and export of this crop. UP is currently an important exporter of Basmati rice; some major districts that grow Basmati rice in Uttar Pradesh being Saharanpur, Muzaffarnagar, Pilibhit, Bareilly, Bijnour, Moradabad, Jyotiba Phule Nagar, Rampur, Raibareilly, and Sitapur.

Exhibit 3.3: Cost of Production of Paddy per Quintal (in Rs)



Source: Directorate of Economics and Statistics, Govt. of Uttar Pradesh; Exim Bank Research

Exhibit 3.4: Cost of Production of Wheat per Quintal (in Rs)



Source: Directorate of Economics and Statistics, Govt. of Uttar Pradesh; Exim Bank Research

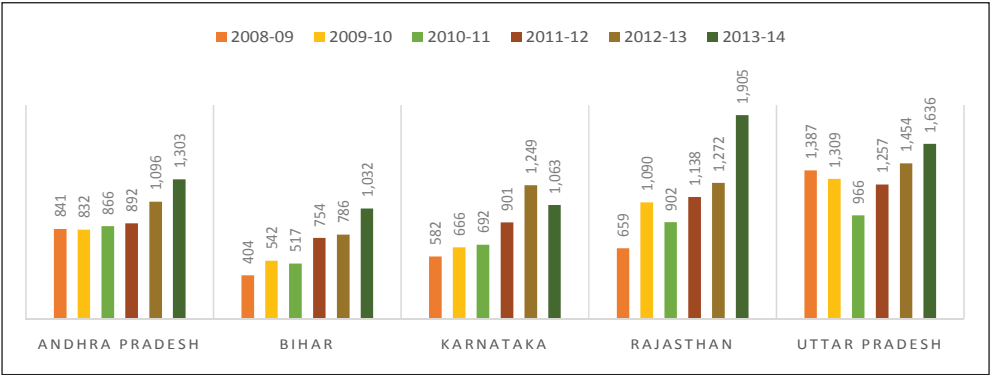
Uttar Pradesh is also one of the major wheat producing States of the country. Exhibit 3.4 presents the cost of wheat production in various States from 2009 to 2014. As is evident, other States have managed their cost of producing wheat better than UP. Similar was the case with respect to the cost of producing maize and sugarcane in Uttar Pradesh.

In order to increase the returns to investments on sugarcane, a strategy of diversification into multiple

by-products could be adopted, to enhance the value addition for every million ton of cane that is crushed. There is a diverse set of by-products of sugarcane that can be leveraged upon.

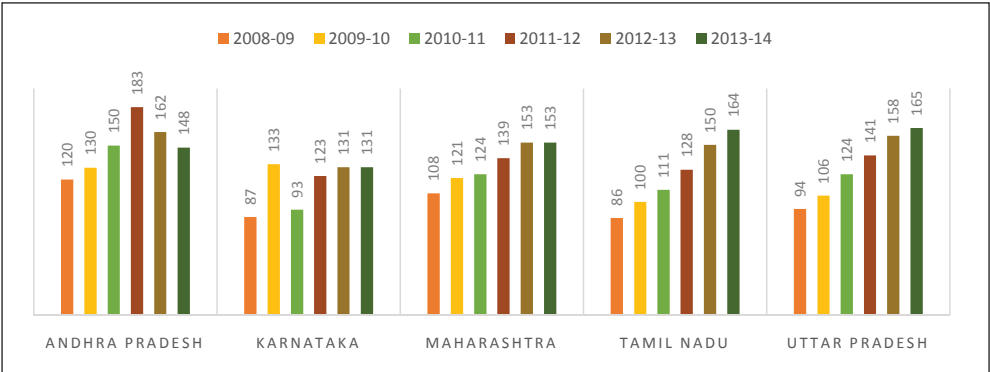
Bagasse based cogeneration for exportable power is an emerging trend in the sugar industry. Bagasse generated by a sugar mill enables the mill to export power after meeting its captive power and steam requirements. The realization from

Exhibit 3.5: Cost of Production of Maize per Quintal (in Rs)



Source: Directorate of Economics and Statistics, Govt. of Uttar Pradesh; Exim Bank Research

Exhibit 3.6: Cost of Production of Sugarcane per Quintal (in Rs)



Source: Directorate of Economics and Statistics, Govt. of Uttar Pradesh; Exim Bank Research

the exportable power is dependent on the long term power purchase agreements with government and power companies.

In India, alcohol is currently produced from molasses. In terms of environmental efficiency, fuel ethanol has the potential to generate revenues through carbon credits, as is the case with bio-diesel. These measures may not yield direct exports benefit, but will certainly help to raise the efficiency and returns of harvesting sugarcane, thus making it more attractive for the farmers. The State can emerge as a leader in innovative usage of the sugarcane crop, and pave the way for higher utility of the crop.

In order to boost the export potential of the Primary sector in the State, value addition needs to be done to the primary produce of the sector. In addition, mechanisms to enhance productivity whilst simultaneously focusing on areas such as agro processing and biotechnology could prove beneficial in this context.

SECONDARY SECTOR

The Uttar Pradesh State Industrial Development Corporation (UPSIDC) and the Department of Infrastructure and Industrial Development are responsible for the development of industrial infrastructure in the State. The key incentives for companies to set up manufacturing unit in the State

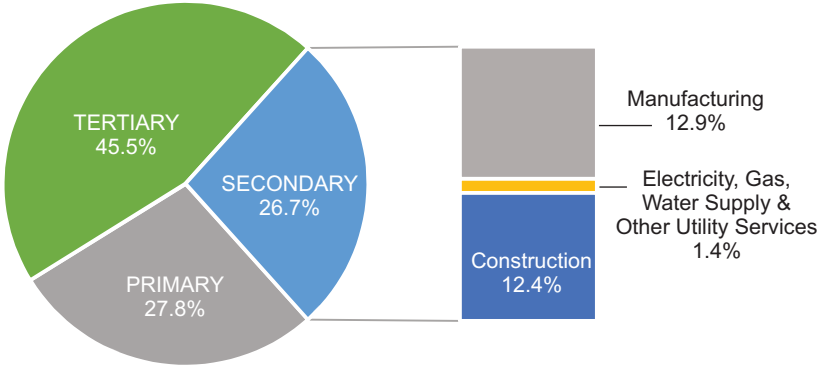
include access to a large consumer market (population of 199.8 million accounting for 16 per cent of India's total consumer base) and proximity to raw material sources.

Overall, the share of Secondary sector in the State declined from 26.7 per cent to 24.1 per cent, during 2011-12 to 2016-17. An analysis of the gross value added by the secondary sector in the State (Exhibit 3.7) indicates that the maximum value addition is by the manufacturing sector, followed closely by construction sector.

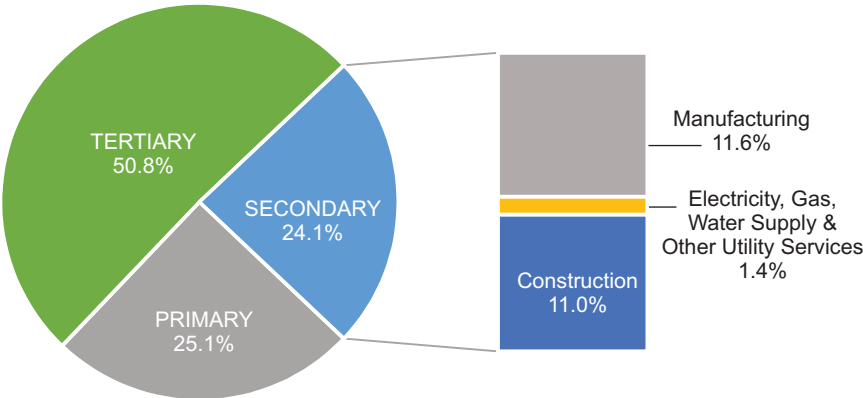
However, the share of both these sectors in the State's GVA recorded a fall - the share of construction sector reduced from 12.4 per cent to 11.0 per cent and that of manufacturing fell from 12.9 per cent to 11.6 per cent during 2011-12 to 2016-17. As seen in Exhibit 3.8, the breakup of Secondary sector for India shows similar trends, with the share of construction going down by 1.8 per cent. Manufacturing, however, registered an increase of a little less than 1 per cent at the all India level, indicating that the share of Uttar Pradesh in the country's manufacturing value added has undergone a decline during the period between 2011-12 and 2016-17. This is a cause of concern for the State given that typically, the manufacturing sector has the highest employment coefficient, implying that the number of jobs created per unit of output is the highest for the manufacturing sector.

Exhibit 3.7: Sectoral Contribution to GSVA of Uttar Pradesh: Secondary Sector

Sectoral GSVA of Uttar Pradesh 2011-12 : Secondary Sector

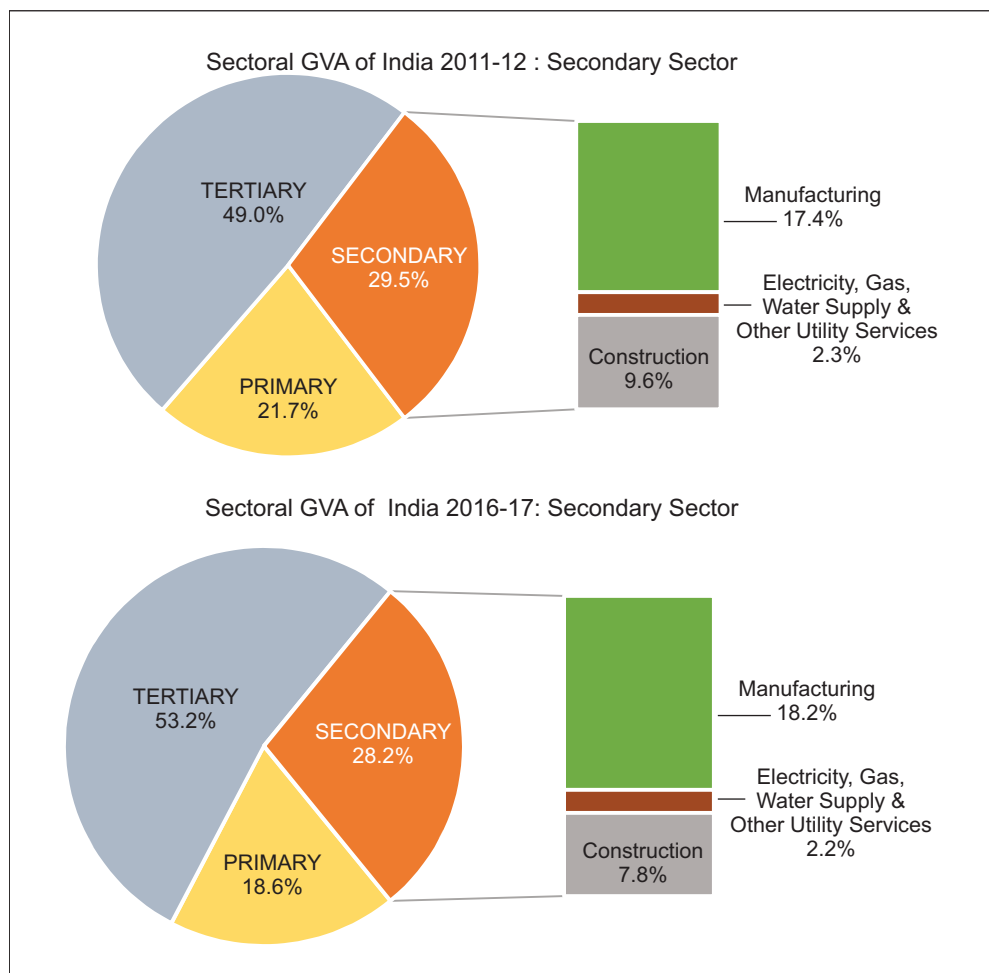


Sectoral GSVA of Uttar Pradesh 2016 -17: Secondary Sector



Source: CSO; Exim Bank Research

**Exhibit 3.8: Sectoral Contribution to GVA of India:
Secondary Sector**



Source: CSO; Exim Bank Research

In order to further scrutinise this sector of the State over a longer time frame, an assessment has been carried out of the changes in number of factories, fixed capital, employment and GVA of the factories registered under the Factories Act in Uttar Pradesh from 1990-91 to 2014-15, using the data from Annual Survey of Industries (ASI)¹⁰.

Table 3.4 shows that the share of the State has consistently fallen in all the four categories considered to assess and evaluate the dynamics in composition, growth and structure of organized manufacturing sector

in the State. The maximum plunge was witnessed in the share of Uttar Pradesh in the fixed capital category, where its share in India declined from 11.0 per cent to 4.4 per cent between 1990-91 and 2014-15. This was also reflected in the trend in the share of GVA of the State in India's GVA for industries. However, an interesting point to note is that the ratio of GVA to Fixed Capital for UP has increased appreciably from 0.39 to 0.49 while that of the country as a whole has increased only marginally from 0.46 to 0.47 during the period between 1990-91 and 2014-15 (Table 3.5).

Table 3.4: Capital, Employment and Value Addition Trends: Uttar Pradesh vs. India

Year	Total No. of factories			Fixed Capital (Rs cr.)			Total Persons Engaged (lakh nos.)			GVA (Rs cr.)		
	UP	India	Share (in per cent)	UP	India	Share (in per cent)	UP	India	Share (in per cent)	UP	India	Share (in per cent)
1990-91	10417	110179	9.5	14691	133648	11.0	8.02	82.8	9.7	5701	61578	9.3
1995-96	10613	134571	7.9	32841	348468	9.4	8.06	102.2	7.9	13556	163023	8.3
2000-01	9634	131265	7.3	34775	399604	8.7	5.40	79.9	6.8	12403	178350	7.0
2005-06	10503	140160	7.5	37631	606940	6.2	6.48	91.1	7.1	19813	364697	5.4
2014-15	14867	230435	6.5	108968	2474455	4.4	8.83	138.8	6.4	53056	1164702	4.6

Source: Annual Survey of Industries (ASI), Ministry of Statistics and Programme Implementation, Government of India

Table 3.5: Value Addition in Factories: Select Ratios

Year	Persons engaged per Factory		GVA to Fixed Capital		GVA per Factory (Rs. Lakh)	
	UP	India	UP	India	UP	India
1990-91	77	75	0.39	0.46	54.7	55.9
1995-96	76	76	0.41	0.47	127.7	121.1
2000-01	56	61	0.36	0.45	128.7	135.9
2005-06	62	65	0.53	0.60	188.6	260.2
2014-15	59	60	0.49	0.47	356.9	505.4

Source: Annual Survey of Industries (ASI), Ministry of Statistics and Programme Implementation, Government of India.

¹⁰Data at unit level are aggregated to yield a picture about a particular type or sector of Industry by the ASI

The Secondary sector in Uttar Pradesh is dominated by Micro, Small and Medium Enterprises (MSME). The State has a number of locally specialised business clusters for both SMEs and larger units such as sports items in Meerut, brassware in Moradabad, perfumes in Kannauj, leather in Kanpur, shoes in Agra, embroidered sarees in Varanasi, carpet in Bhadohi, Chikan work in Lucknow, among others (Table 3.6 and 3.7).

Most MSME units are concentrated in the more developed Western part of the State. Areas such as the Central and Bundelkhand region have scope

for higher level of investments by MSMEs, especially in the handloom, handicrafts and power loom sectors since these are the MSME clusters predominant here.

Dedicated Industrial Centres

Over the years, the State has made an effort towards creating dedicated industrial infrastructure that includes 15 industrial areas, 12 specialised parks, 4 growth centres and Industrial Infrastructure Development Centres (IIDC). With a 57 per cent share in the total length of 1,839 km, the State is the major beneficiary of the Eastern Dedicated Freight Corridor project¹¹.

Table 3.6: Major MSME Clusters in the State

Product	MSME Cluster
Ceramics	Bulandshahr
Brass & Art ware, Metal ware	Moradabad
Carpet	Bhadohi, Varanasi, Mirzapur, Shahjahanpur
Chikan	Lucknow and nearby districts
Pottery	Khurja, Nizamabad
Woodcarving	Saharanpur
Locks, Building Hardware, Artmetal	Aligarh
Silk and Brocade, Benarsi saree	Varanasi
Leather	Kanpur Unnao, Agra
Powerloom, handloom	Jhansi, Mau,
Zari, embroidery	Lucknow, Farukhabad, Bareilly, Unnao
Art Jewellery	Meerut, Kanpur, Varanasi, Ghaziabad
Scissor	Meerut
Glass	Firozabad
IT/ITeS	Noida

Source: UP State Industrial Development Corporation, Uttar Pradesh

¹¹This has been elaborated in Chapter 4

Table 3.7 : District-wise Industry Clusters in Uttar Pradesh

Industry Code	Industry Classification	Districts
1520	Manufacture of Dairy Products	Aligarh, Etah, Mathura, Kaushambi, Lucknow, Chandauli
1531	Manufacture of Grain Mill Product	Kaushambi, Pratapgarh, Shahjahanpur, Etawah, Sitapiur, Ghazibad
1542	Manufacture of Sugar	Azamgarh, Meerut, Balrampur, Bareilly, Sitapur, Baghpat, Moradabad, Saharnpur
1711	Preparation and Spinning of Textile Fibre including Weaving	Mathura, Allahabad, Azamgarh, Ballia, Mau, Banda, Rae Bareilly, Bulandshahar, Jaunpur, Ghazipur, Mirzapur
1722	Manufacture of Carpets and Rugs	Sant Ravidas Nagar, Bhadohi
1810	Manufacture of Wearing Apparel except Fur Apparel	Gautam Budha Nagar, Kanpur
1920	Manufacture of Footwear	Agra, Pratapgarh
2412	Manufacture of Fertilisers and Nitrogen Compounds	Allahabad, Bareilly, Badaun, Sultanpur, Gorakhpur, Kanpur
2511	Manufacture of Rubber tyres and Tubes	Meerut
2520	Manufacture of Plastic Products	Shahjahanpur, Gautam Budha Nagar
2710	Manufacture of Basic Iron and Steel	Fatehpur, Hamirpur, Ghaziabad, Sultanpur, Unnao, Muzaffarnagar
2720	Manufacture of Basic Precious and Non Ferrous Metals	Aligarh
3230	Manufacture of TV and Radio and associated goods	Gautam Budha Nagar, Ghaziabad
3410	Manufacture of Motor Vehicles	Gautam Budha Nagar, Lucknow
3591	Manufacture of Motorcycles	Gautam Budha Nagar, Kanpur

TERTIARY SECTOR

The significance of the Tertiary sector in the economic structure of Uttar Pradesh has been gradually increasing. As is evident from Exhibit 3.9, the Tertiary sector has been contributing the maximum share in the gross value added of the State. The contribution of the sector to the

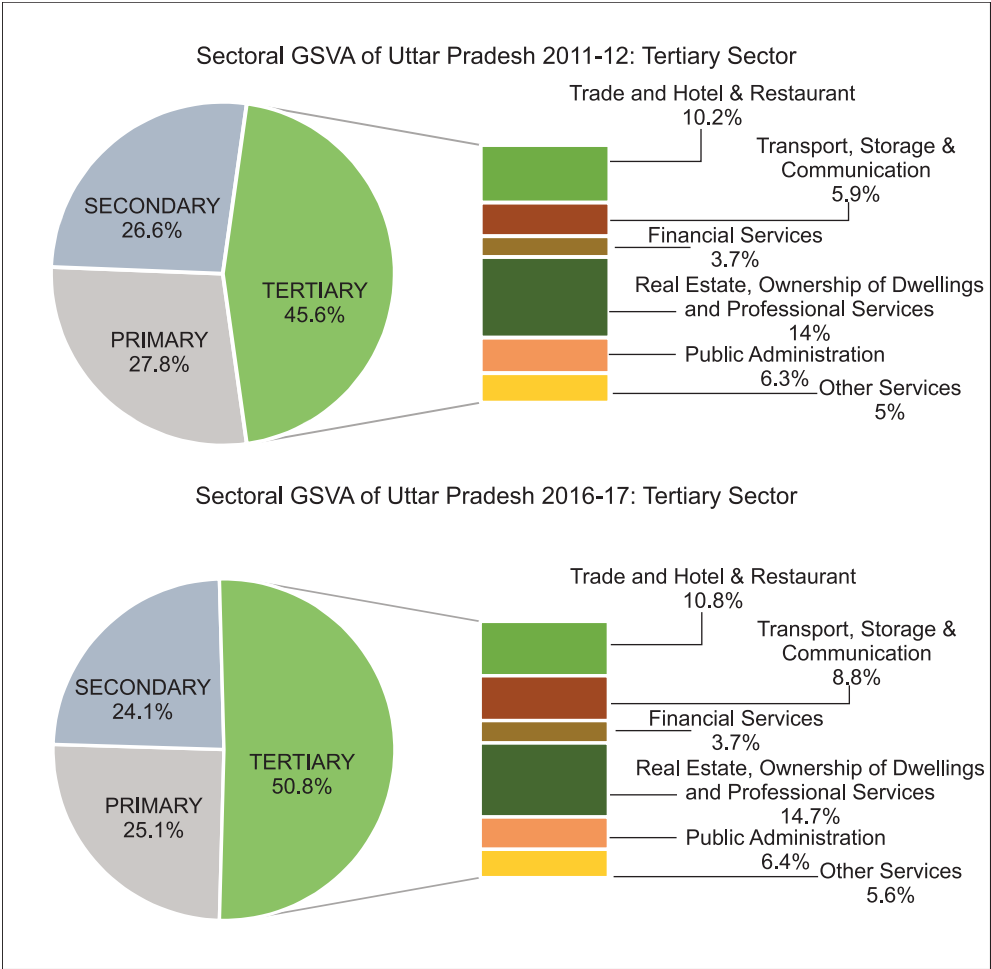
State's GVA has risen from 45.6 per cent in 2011-12 to 50.8 per cent in 2016 – 17. The sector has seen growing activities across all segments such as trade and tourism, transport, financial services, communications, real estate, public administration and other services. The factors leading to this rapid rise include increasing purchasing power, rising social

mobility and digital penetration to rural markets, all of which are creating a spurt in demand for the services sector in the State. Foreign companies have been outsourcing to enterprises incorporated in the State in the area of business services and information technology services.

A comparison of the growth in GVA in the Tertiary sector in Uttar Pradesh

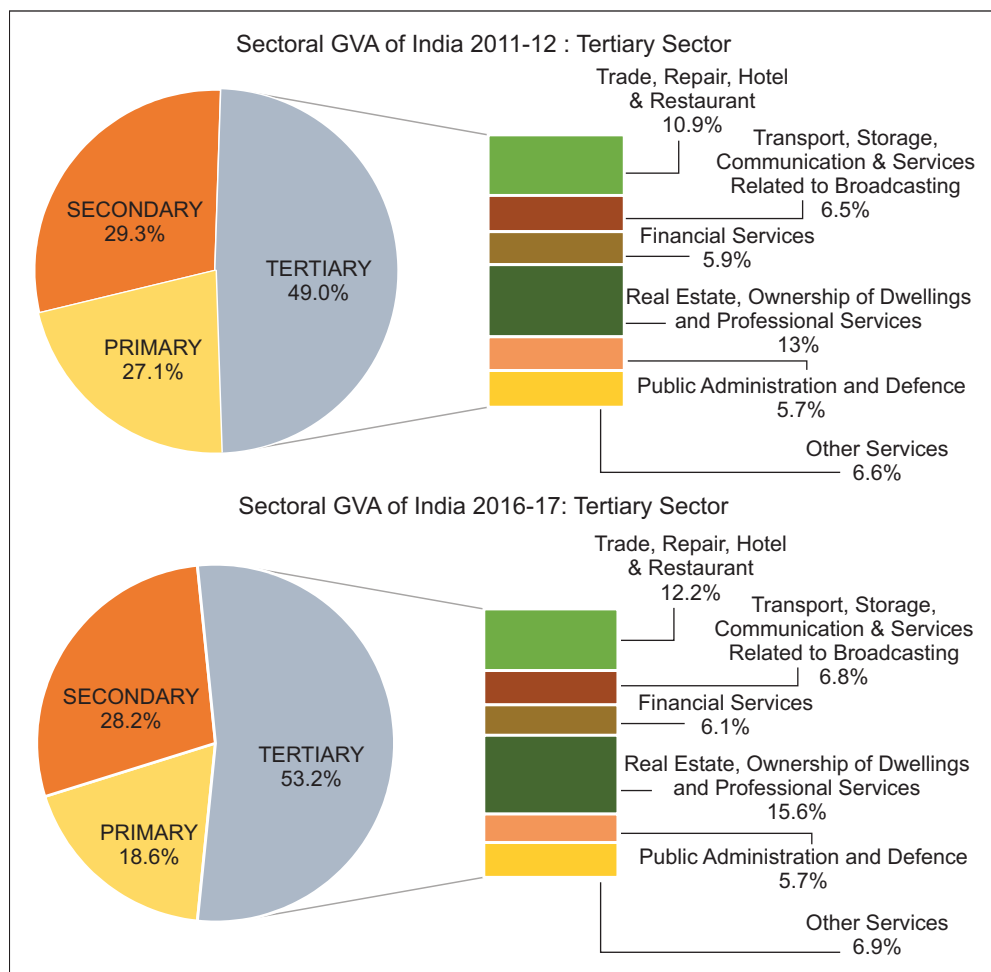
with that of India (Exhibit 3.10), reveals that sectoral contribution of the Tertiary sector to India's GVA has also witnessed a rise - from 49.0 per cent in 2011-12 to 53.2 per cent in 2016-17. The contribution of real estate, ownership of dwellings and professional services sector continues to remain the largest in value addition at both the State and country level.

Exhibit 3.9: Sectoral Contribution to GSVA of Uttar Pradesh: Tertiary Sector



Source: CSO; Exim Bank Research

Exhibit 3.10: Sectoral Contribution to GVA of India: Tertiary Sector



Source: CSO; Exim Bank Research

IT and ITES Sector

Uttar Pradesh has emerged as a key hub for IT & ITeS industries, including software, captive business process outsourcing (BPO) and electronics. The State has become a hub for the semiconductor industry with several major players having their offices and R&D centres in Noida. Uttar Pradesh,

as one of the largest contributor to IT/ITeS sector, has been consistently focusing on developing infrastructure and human capital and implementing effective policy so as to create a conducive ambience for IT industry. The major factors backing the IT & ITeS industry in the State are the structured incentives to IT & ITeS companies. For instance IT/ITeS companies

with investments of more than USD 0.79 million can avail of interest free loans. Moreover, the increasing upgradations in the infrastructure owing to rising investments along with proximity to the pool of talent are additional positive factors for the IT/ITeS industry in the State. In 2015-16, the software exports from the State reached Rs 1645 crore (Table 3.8). These exports have been primarily achieved through software technology parks in the State.

The Government of Uttar Pradesh has been creating an enabling environment to give a further push to sectors such as healthcare, communications, and information technology, among others. Companies are increasingly investing towards the development of IT infrastructure in the State. In 2016, the State of Uttar Pradesh came up with a new policy - "Uttar Pradesh IT & Start-up Policy, 2016", aimed at promoting Uttar Pradesh as a preferred and

attractive location for investments by various IT/ITeS companies.

In addition to this, the policy also aims at creating employment opportunities, improving talent pool quality, etc. for establishing skilled IT manpower in Uttar Pradesh. As per budget 2016-17, the State government decided to establish around 12 polytechnics related to information technology in the State during 2016-17. An encouraging regulatory framework and an easing of trade barriers at both domestic and international levels through agreements can enhance the State's competitiveness at a global level, which would eventually lead to an increase in the quality of employment. The State has envisaged a development plan including providing infrastructural and logistical boost to this sector and improve the penetration into other regions of the State apart from Northern UP.

Table 3.8: State-wise Software Exports from STPI (Rs. crore)

States	2015-16	2014-15	2010-11
Karnataka	1,25,419	1,09,798	70,241
Maharashtra	64,063	61,314	49,874
Telangana	41,480	39,186	28,675
Tamil Nadu	33,905	33,276	42,100
Haryana	19,265	17,858	13,651
Uttar Pradesh	16,451	13,740	10,282
All India	3,19,569	2,28,647	2,93,797

Source: STPI, Annual Reports 2016

Tourism Industry

Uttar Pradesh attracts a large number of both national and international visitors, on account of its many tourist attractions. These are located across the cities of Agra, Lucknow and Varanasi. The cities of Ayodhya, Mathura, and Allahabad are among the other famous tourist places. The State hosts a Kumbh Mela at Allahabad on the confluence of rivers Ganga and Yamuna every 12 years, where over 10 million Hindus congregate – the largest gathering of human beings in the world. Dudhwa National Park is one of the best Tiger reserves in the country. About 13 km from Varanasi is the historically important town of Sarnath. Gautama Buddha gave his first sermon at Sarnath after his enlightenment and hence this is an important pilgrimage

site for the Buddhists. Also at Sarnath are the Ashoka Pillar and the Lion Capital, both important archaeological artefacts with national significance.

As could be observed in Table 3.9, compared to the previous year, the inflow of foreign and domestic tourists in Uttar Pradesh has been going up year on year, except 2014. However, the share of foreign tourists has been falling since 2014, which could be an aspect where appropriate interventions by the State government is needed. This could essentially be in the form of branding and marketing the rich tourist heritage that Uttar Pradesh has. Given the vast potential of the State in terms of natural beauty, wildlife parks, historical monuments and religious destinations, the State can become a premiere tourist destination for foreigners.

Table 3.9: Inflow of Domestic and International Tourists in Uttar Pradesh

Year	Indian	Foreigner	Total	Share of Foreign Tourists	Growth (%)		
					Indian	Foreigner	Total
2011	15,54,30,364	26,39,072	15,80,69,436	1.67%	7.4%	13.5%	7.5%
2012	16,94,48,596	29,89,347	17,24,37,943	1.73%	9.0%	13.3%	9.1%
2013	22,78,18,408	32,05,760	23,10,24,168	1.39%	34.4%	7.2%	34.0%
2014	18,42,77,423	29,09,735	18,71,87,158	1.55%	-19.1%	-9.2%	-19.0%
2015	20,65,15,617	31,04,062	20,96,19,679	1.48%	12.1%	6.7%	12.0%
2016	21,35,44,204	31,56,812	21,67,01,016	1.46%	3.4%	1.7%	3.4%
CAGR	6.6%	3.6%	6.5%		---		

Source: Uttar Pradesh Tourism, Government of Uttar Pradesh.

4. EXPORTS FROM UTTAR PRADESH: RECENT TRENDS

The multitude of resource endowments, coupled with diverse production and value addition networks, provides UP with the opportunity to contribute significantly to the country's exports. During 2016-17, Uttar Pradesh ranked 5th among all States by value of exports. The State was ranked 6th till 2014-15, but after carving out the new State of Telangana from Andhra Pradesh, the

State improved its rank to 5th in the country in terms of value of exports. Merchandise exports from the State amounted to USD 12.53 Billion during 2016-17, up from USD 10.94 Billion in 2012-13 (Table 4.1). The exports from the State recorded an annual average growth rate of 4.1 per cent, which was one of the fastest among the top exporting States.

Table 4.1: Top Indian States by Value of Exports (2012-17) in USD Billion

STATE	2012-13	2013-14	2014-15	2015-16	2016-17	Annual Average Growth (in per cent)
Maharashtra	66.47	71.75	72.85	66.57	67.43	0.5
Gujarat	61.50	73.40	61.24	49.82	54.21	-1.8
Tamil Nadu	27.10	26.87	27.49	25.56	26.45	-0.5
Karnataka	17.50	17.67	23.62	19.26	19.68	4.6
Uttar Pradesh	10.94	13.26	13.91	12.40	12.53	4.1
Andhra Pradesh	14.31	15.50	15.91	12.14	11.94	-3.6
Haryana	9.76	10.66	11.30	10.34	10.69	2.6
Delhi	8.58	9.24	10.03	9.30	10.55	5.6
West Bengal	9.43	10.50	9.09	7.47	8.24	-2.4
Punjab	6.49	7.06	6.78	5.61	5.28	-4.6
All India	300.40	314.42	310.35	262.29	275.85	-1.7

Source: DGCIS, Exim Bank Research

When compared with the land locked States in the country (including Haryana, Punjab and Delhi), Uttar Pradesh has the highest share in merchandise exports, and it has been able to maintain this lead. The State's share in India's exports rose from 3.6 per cent in 2012 to 4.5 per cent in 2016-17 (Table 4.2). Being landlocked leads to high transport costs due to distance from major sea ports, which results in the erosion of competitive edge for exports from the State. The sheer size of the economy of Uttar Pradesh gives it a certain advantage that mitigates the downsides of being land locked to some extent. It is noteworthy that the share of UP in the country's exports is greater than that of even West Bengal, a coastal state with access to Kolkata port.

The export basket of the State has remained more or less constant and does not include much of high value products. A product-wise analysis

of exports from the State (Exhibit 4.1) reveals that the buffalo meat sector contributes a significant share, followed by precious metal jewellery and leather footwear. The share of buffalo meat was 12.8 per cent in 2012-13, which increased to 16.6 per cent in 2014-15, before moderating to 14.9 per cent in 2016-17. Readymade garments of manmade fibres was the only segment which has witnessed a consistent and secular increase in its share in UP exports during the period 2012-13 to 2016-17. In fact, its share in exports of UP surpassed that of readymade garments of cotton for the first time in 2016-17. Diversification of products, especially in favour of technology-oriented high value products like electronic components, hardware and equipment, scientific instruments, aerospace components and pharmaceuticals could fetch far better price realisations for the State in the international market.

Table 4.2: Share of States in Exports (2012-17)

STATE	2012-13	2013-14	2014-15	2015-16	2016-17
Maharashtra	22.1%	22.8%	23.5%	25.4%	24.4%
Gujarat	20.5%	23.3%	19.7%	19.0%	19.7%
Tamil Nadu	9.0%	8.5%	8.9%	9.7%	9.6%
Karnataka	5.8%	5.6%	7.6%	7.3%	7.1%
Uttar Pradesh	3.6%	4.2%	4.5%	4.7%	4.5%
Andhra Pradesh	4.8%	4.9%	5.1%	4.6%	4.3%
Haryana	3.2%	3.4%	3.6%	3.9%	3.9%
Delhi	2.9%	2.9%	3.2%	3.5%	3.8%
West Bengal	3.1%	3.3%	2.9%	2.8%	3.0%
Punjab	2.2%	2.2%	2.2%	2.1%	1.9%

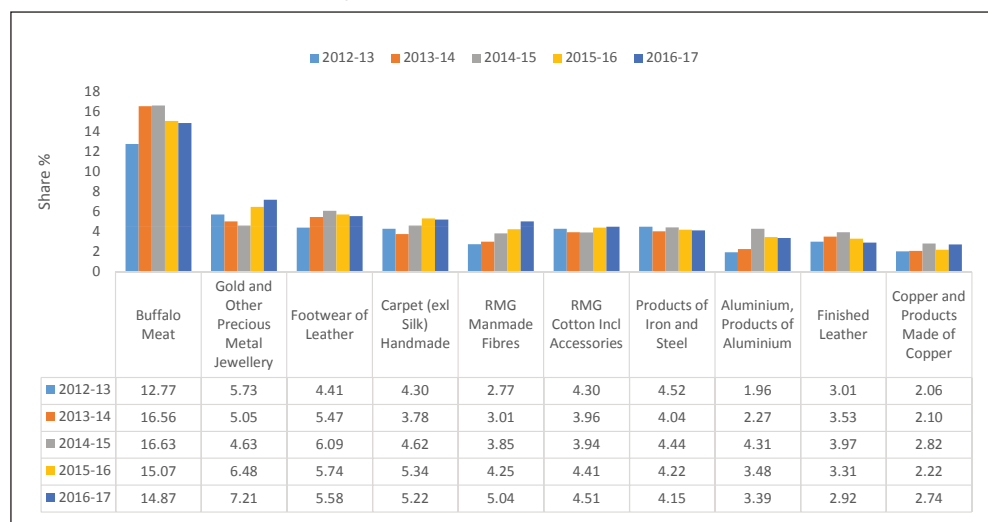
Source: DGCIS, Exim Bank Research

The top export destinations of the State are mapped in Table 4.3. According to DGCIS data, the State exports majorly to USA, UAE and UK. Recently, the share of exports to Vietnam has also risen, primarily driven by growing exports of buffalo meat. USA and UAE have continued to account for the biggest shares, which have further risen during the period 2012-13 to 2016-17. The share of Vietnam has grown significantly, while that of China has consistently fallen during this period.

The main exports of UP to USA in 2016-17 included carpets, products of

iron and steel, readymade garments and handicrafts. UAE is another important destination, with its import basket from the State comprising gold and other precious metal jewellery, readymade garments and electronic components. The export basket for Germany consists mainly of footwear of leather, carpets and readymade garments. Other major partner countries for Uttar Pradesh include UK, China and Vietnam among others. The overall share of these major export destinations has also grown from 55.14 per cent of total exports in 2012-13 to 62.89 per cent of total exports in 2016 – 17.

Exhibit 4.1: Share of Key Sectors in Exports of UP (2012-17) in Per Cent



Source: DGCIS, Exim Bank Research

Table 4.3: Share of Major Export Destinations in Exports from Uttar Pradesh (in Per Cent) (2012-17)

Country	2012-13	2013-14	2014-15	2015-16	2016-17
U S A	14.13	12.97	14.90	16.90	17.31
United Arab Emirates	12.04	12.61	10.97	12.54	13.95
U K	6.24	5.94	6.73	6.80	6.21
Germany	5.19	4.94	5.44	5.44	5.40
Vietnam	4.44	8.44	9.23	9.51	9.67
China	3.28	2.68	2.51	2.19	2.13
France	2.62	2.61	2.61	2.53	2.60
Italy	2.53	2.44	2.38	2.22	2.28
Spain	2.36	2.17	2.30	2.82	2.65
Thailand	2.30	2.15	2.47	1.16	0.70
Share of Top 10 Countries	55.14	56.94	59.54	62.11	62.89

Source: DGCIS, Exim Bank Research

EXPORT INFRASTRUCTURE IN THE STATE

Inland Container Depots (ICDs) and Container Freight Stations (CFSs)¹² are important hubs in the logistics chain. The Government of India has set up ICDs at inland points away from sea ports in order to enable exporters and importers to handle their shipments near their place of location. CFSs have been established to speed up trade and help small exporters, whose consignments are less than container loads. These help decongest ports. As on November 2016, there were eight functioning

ICDs and nine functioning CFSs in the State, while another two ICDs were under implementation. ICDs in the State are in Agra, Moradabad and Kanpur (Table 4.4). A CFS acts as an extension of a port/airport/ICD customs station, set up with the main objective of decongesting the ports, where only a part of the customs process, mainly the examination of goods is normally carried out by Customs. At a CFS, goods are stuffed into containers or de-stuffed therefrom and aggregation/segregation also takes place at such places.

Needless to emphasize, these facilities are imperative for the growth

¹²Essentially, movement of goods from a port, airport or LCS to an ICD shall be in the nature of movement from one custom station to another custom station and will be covered by Goods Imported (Condition of Transshipment) Regulations, 1995. In contrast, movement of goods from a customs station at port/airport/ LCS/ICD to a CFS would be akin to local movement from a custom area of a customs station to another custom area of the same station and such movement is covered by local procedure evolved by the Commissioner of Customs and covered by bonds, bank guarantee, etc.

Table 4.4: State-wise Functional and Under Implementation ICDs/CFSSs for the Period 1992 to 2016

State	Inland Container Depots		Container Freight Station		Total
	Functional	Under Implementation	Functional	Under Implementation	
Tamil Nadu	9	1	48	5	63
Maharashtra	7	4	40	3	54
Gujarat	7	1	23	5	36
Uttar Pradesh	8	2	9	0	19
Andhra Pradesh	2	0	5	8	15

Source: Annual Report 2016-17, Ministry of Commerce and Industry (as on November 11, 2016)

in exports from a landlocked State like Uttar Pradesh. The Government of Uttar Pradesh has proposed development of Boraki Railway Station as the major passenger and goods based rail terminal with state-of-the-art infrastructure through public private partnership. Boraki Railway Station is close to the proposed 2500 Acre SEZ, 1000 Acre Handicraft SEZ, Container Depot at Dadri. Moreover, Boraki Rail Terminal is proposed to be connected to the Container Depot at Tughlakabad with a new alignment that connects with Noida as well. The State is also a major beneficiary of the Eastern Dedicated Freight Corridor project, with a 57 per cent share in the total length of 1,839 km. Various integrated logistics hubs (free-trade warehousing zones) are expected to be developed in collaboration with Mitsui (Japan), Mineral & Mining

Trading Corporation and IL&FS.

Uttar Pradesh, a State with an access to robust industrial infrastructure, has 15 industrial areas, 12 specialised parks, 4 growth centres and Industrial Infrastructure Development Centres (IIDC). The development of integrated agro/food processing zones has been proposed at Hapur, about 54 km from Delhi. Table 4.5 elaborates the various Industrial Parks developed in the State.

Special Economic Zones

To enhance foreign investment and promote exports from the country, and to create a level playing field for domestic enterprises and manufacturers to be competitive globally, Special Economic Zones¹³ (SEZ) have been promoted by the Government of India. As of

¹³A SEZ is a specified demarcated duty-free territory, which for the purpose of trade operations is deemed to be considered outside the customs territory of India. Set up primarily to promote exports, even GST regime continues to incentivize SEZ units by extending due benefits for their authorized operations.

Table 4.5: Types of Industrial Parks in Uttar Pradesh

Infrastructure (type)	Location	Area (acres)
Growth centre	Bijoli, Jhansi	385
Growth centre	Shajahanpur	311
Growth centre	Dibiyapur	246
Growth centre	Jainpur	331
Agro park	Barabanki	180
Agro park	Varanasi	261
Apparel park	Tronica City	146
Textile and hosiery park	Kanpur	173
Apparel Park, Tronica City	Ghaziabad	146
Leather technology park	Banthar, Unnao	233
Export promotion industrial park	Greater Noida	200
Export promotion industrial park	Shastripuram, Agra	102

Source: UP State Industrial Development Corporation, Govt. of Uttar Pradesh

September, 2017¹⁴, cumulative all India figures showed that close to Rs. 4,48,832.43 crore of investments were made in these SEZs, and a total of 18,23,451 jobs were created while catalysing exports worth Rs. 2,66,773 crore (growth of 13.1 per cent over the exports of the corresponding period of FY 2016-17). The robust infrastructure facilities and attractive fiscal benefits on offer in SEZ essentially aim to fuel economic growth and exports. Currently, there are 12 operational SEZs in Uttar Pradesh (full list in Annexure 1).

As on December 2017, Uttar Pradesh had 58 SEZs; of which, twelve were operational, twenty one were notified, twenty four were formally approved and one was approved

in-principle. The State government sanctioned SEZs in the State to accommodate various sectors such as IT/ITeS, textiles, handicrafts, and non-conventional energy. IT/ITeS accounted for the maximum share of approved SEZs in the State, followed by electronic products.

The data on exports from the SEZ from various States has been analysed in Exhibit 4.2. It shows that SEZ in Gujarat have a major share of the total exports from SEZ, accounting for 31.19 per cent of export in 2015-16, down from 45.55 per cent in 2013-14. The share of Uttar Pradesh has risen consistently from 3.30 per cent in 2013-14 to 4.03 per cent in 2015-16, holding the sixth rank in terms of share of States in exports from SEZs.

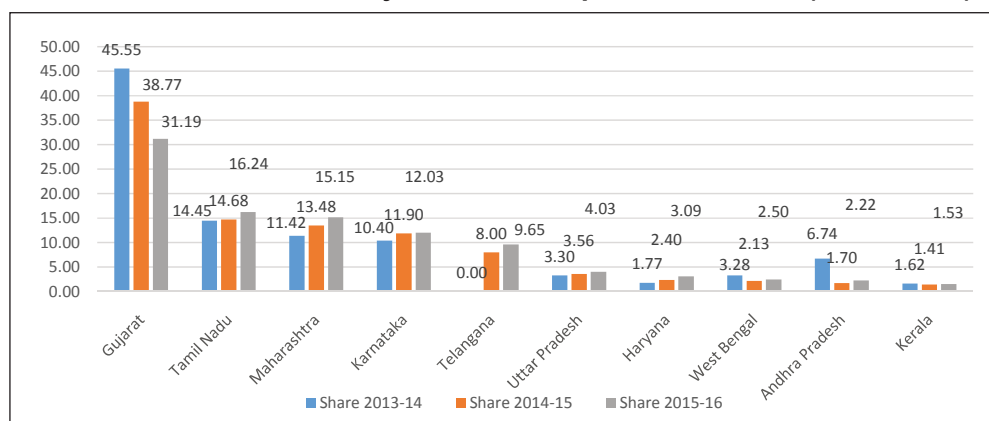
¹⁴Ministry of Commerce and Industry

Table 4.6: State-wise Distribution of Approved Special Economic Zones

States	Formal Approvals	In-principle approvals	Notified SEZs	Exporting SEZs (Central Government + State Government/Pvt. SEZs + notified SEZs under the SEZ Act, 2005)
Tamil Nadu	48	4	46	36
Telangana	52	0	44	27
Maharashtra	55	9	50	26
Karnataka	62	0	41	25
Andhra Pradesh	29	4	24	19
Gujarat	28	4	24	18
Kerala	29	0	25	16
Uttar Pradesh	24	1	21	12

Source: Ministry of Commerce and Industry (as on 01.12.2017)

Exhibit 4.2: States with Major Share in Exports from SEZs (in Per Cent)

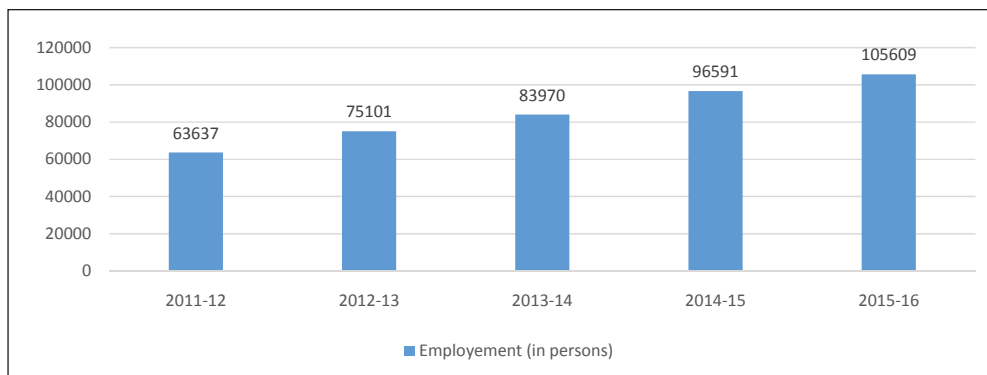


Source: Ministry of Commerce & Industry; Exim Bank Research

As depicted in Exhibit 4.3, the State has enjoyed a rising trend in employment in its SEZs, from 63637

persons in 2011-12 to 105609 persons in 2015-16.

Exhibit 4.3: Employment Generated from SEZs in Uttar Pradesh (in Persons)



Source: Ministry of Commerce & Industry; Exim Bank Research

**Table 4.7: Employment Generated in Special Economic Zones:
State-wise Comparison**

State	Exports from SEZ in Rs Crore 2015-16 (Till December 2015)	Employment Generation	Employment Generated per Rs Crore of Exports
Rajasthan	1649.17	17246	10.46
Kerala	5213.88	49652	9.52
Punjab	235.34	2058	8.74
Odisha	752.03	5920	7.87
Uttar Pradesh	13754.51	105609	7.70
Andhra Pradesh	7599.06	58335	7.68
Haryana	10574.66	79842	7.55
West Bengal	8550.41	62407	7.30
Maharashtra	51777.29	361152	6.98
Karnataka	41088.64	237138	5.77
Tamil Nadu	55478.96	309873	5.59
Telangana	32966.19	170029	5.16
Chandigarh	1896.38	7497	3.95
Madhya Pradesh	3579.48	11306	3.16
Gujarat	106568.7	66114	0.62
TOTAL	341684.8	1544526	4.52

Source: Ministry of Commerce & Industry; Exim Bank Research

An interesting point to note that in terms of employment generated per Rs. 1 crore of exports, Uttar Pradesh ranked fifth with an employment intensity of 7.70 as against the national average of 4.52 (Table 4.7).

Export Oriented Units

The Export Oriented Units (EOUs) scheme was introduced in early 1981, primarily to boost exports by creating additional production capacity. It was introduced as a complementary scheme to the Free Trade Zones/ Export Processing Zone (EPZ) Scheme introduced in the sixties, which was not very successful mainly due to locational restrictions. It adopts the same production regime as SEZs (erstwhile EPZs) but offers a wide option in locations.

Exports from EOUs during 2016-17 (up to September 30, 2016) were nearly Rs. 39,412.03 crore (USD 5.88 billion) as compared to exports of Rs. 97,493.23 crore (USD 14.89 billion) during the full financial year 2015-16. EOUs are mainly concentrated in sectors of textiles and yarn, food processing, gems and jewellery, computer software, electronics, chemicals, plastics, granites and minerals/ores.

Table 4.8: Functional EOUs in India

State	Functional EOUs as on November 24, 2016
Karnataka	422
Tamil Nadu	403
Maharashtra	224
Gujarat	185
Telangana	173
Andhra Pradesh	77
Uttar Pradesh	56

Source: Annual Report 2016-17, Ministry of Commerce and Industry (as on November 24, 2016)

In relation to the EOUs, all imports and domestic procurements are duty free. Under GST regime also, it has been clarified that EOUs are allowed to import goods for the authorized operations without paying basic custom duties (BCD). But such goods would be charged IGST and applicable cesses¹⁵.

In a further boost to infrastructure in the State, the Uttar Pradesh Government is drafting its own logistics policy. Since both the Eastern and the Western freight corridors and several industrial corridors would pass through Uttar Pradesh, the State is strategically positioned to take advantage of the infrastructural developments in the country. The upcoming Western Dedicated Freight Corridor (WDFC)

¹⁵In respect of indigenous procurements, the taxes so paid will be available as input tax credit (ITC) to EOUs and refund of the same can be claimed after exports. Furthermore, to create a level playing field for domestic players, if an EOU makes domestic clearances, they will have to pay amount of BCD exemption benefit availed on imported inputs which were used in such domestic clearances.

stretches from Dadri in Ghaziabad to Jawaharlal Nehru Port in Mumbai via Vadodara – Ahmedabad – Palanpur – Phulera – Rewari and covers an overall length of 1504 Km. The freight corridor will be a double line electric track with world class and state-of-the-art technology. The WDFC is of immense significance to the economy of Uttar Pradesh as it has the potential to reduce the travel time of goods from the State by almost 14 hours. The Eastern Dedicated Freight Corridor (EDFC) with a route length of 1856 km consists of two distinct segments: an electrified double-track segment of 1409 km between Dankuni in West Bengal & Khurja in Uttar Pradesh and an electrified single-track segment of 447 km between Ludhiana - Khurja – Dadri. Out of the 1856 km total length of rail track in the EDFC project, 1049 km (57 per cent) passes through 18 districts of Uttar Pradesh.

The State is also amongst the first to implement the e-way bill which is a digital permit and tracker of cargo transportation in the country. The State Government is also planning to partner with Container Corp of India to set up a logistics park in Bhaupur, near Kanpur. Similar such hubs are envisaged to be built along the Delhi-Mumbai Industrial Corridor (DMIC)¹⁶ and the Amritsar-Kolkata Industrial

Corridor (AKIC). Uttar Pradesh has an area of 36,000 sq. km, extended across 12 districts along Delhi Mumbai Industrial Corridor. Greater Noida is the first node of DMIC. Projects such as Integrated Industrial Township at Greater Noida, Multi-Modal Logistics hub at Dadri and Multi-Modal Transport Hub at Boraki are already underway. Meerut Muzaffarnagar Industrial Area and other new industrial regions will also be established to benefit from the corridor.

The AKIC project is structured around the Eastern Dedicated Freight Corridor and the highway systems that exist on this route. The State government has planned infrastructural projects like Integrated Industrial Townships, Integrated Manufacturing Clusters and logistics hubs along this corridor as well. The Government has identified green field railway stations along which new industrial zones will be developed.

Focussing on well-developed export infrastructure could prove to be a successful strategy for boosting exports further from SEZs and EOUs. Uttar Pradesh has a good number of SEZ and EOUs, but realising full export potential would require more robust connectivity with the ports, since it is a landlocked State. Under the new GST regime, all export of

¹⁶Leveraging the high speed, high capacity connectivity backbone provided by the WDFC, the DMIC is being developed alongside this freight corridor. The DMIC project incorporates mega Industrial zones, three ports and six airports and a six-lane intersection-free expressway connecting Mumbai and Delhi and power plants

goods/ services and supplies of goods/ services made to SEZ are chargeable to IGST, however, these supplies shall be treated as zero-rated supplies under GST¹⁷. Any procurement (of raw material, goods or services) made by SEZ from outside India for its authorized operations have been exempted from BCD and IGST both.

Foreign Direct Investment

The State has been receiving Foreign Direct Investments in all major sectors

(Table 4.9). The industrial hubs like Noida, Kanpur and Lucknow have been top favourites for receiving the FDI. FDI for software industry, semiconductors and communications equipment has been concentrated majorly in Noida. According to fDi Intelligence from the Financial Times¹⁸, the State attracted FDI capital investment inflows worth USD 12,075.80 million cumulatively during the period January 2003 to November 2017.

¹⁷Resultantly, the suppliers making any supply to SEZ will have two options, either, not charge any Integrated GST (IGST) to SEZ and supply under a cover of bond/letter of undertaking and file refund claim of corresponding Input Tax Credit (ITCBSE 0.60%); or charge IGST on its supply, pay it and then claim. With regard to outward supply made by a SEZ unit, if a SEZ unit makes any domestic clearances (i.e. within India), the customer will be required to file a bill of entry (BoE), pay BCD and IGST on the transaction and report it as a part of his inward supply as imports. Alternatively, if SEZ make domestic clearances without the cover of BoE, such transactions will be required to be reported by SEZ as its outward supply.

¹⁸fDi Intelligence from the Financial Times tracks cross border investment in a new physical project or expansion of an existing investment which creates new jobs and capital investment. This data differs from official data on FDI flows as company can raise capital locally, phase their investment over a period of time, and can channel their investment through different countries for tax efficiency

Table 4.9: FDI in Uttar Pradesh (Figures in USD Million)

Destination Cities	Software	Semi-conductor	Communication	Fossil fuel	Retail banking	Others	Total
Noida	2,020.90	1,124.70	491.6			3,955.90	7,593.10
Lucknow	16.4				98.6	213.5	328.5
Kanpur	1.7		6.4			74.7	82.8
Moradabad					49.3	69.9	119.2
Etah				953.3			953.3
Meerut						140.1	140.1
Mathura					49.3	31.7	81
Saharanpur					49.3	121.5	170.8
Dadri						189.8	189.8
Jhansi						142.7	142.7
Gonda					49.3		49.3
Aligarh					49.3		49.3
Bareilly					49.3		49.3
Greater Noida			905.8			42.3	948
Shahjahanpur						121.5	121.5
Agra						222.5	222.5
Allahabad					49.3	15	64.3
Gorakhpur						37	37
Varanasi		301			49.3	12.8	363.1
Ghaziabad						370.2	370.2
Total	2,039.00	1,425.70	1,403.80	953.3	493	5,761.10	12,075.80

Source: fDi Markets; Exim Bank Research

5. MARKET IDENTIFICATION AND EXPORT POTENTIAL

While exports from Uttar Pradesh have registered robust increase in the recent past, in order to continue this trend going forward, it might be essential to identify key products and markets which provide opportunities for firms in the State to grow and achieve economies of scale, as also increase their efficiency levels. The State has significant comparative advantage in several products, which can be targeted for boosting exports.

The present section undertakes an analysis of the products where the State's exports have demonstrated comparative advantage. Quantification of comparative advantage will help in identification of products where exports from the State have been performing well, as also those where success has been limited, although opportunities are significant.

COMPETITIVENESS INDICATORS

Revealed Comparative Advantage Indices are used to identify categories of exports in which an economy has a comparative advantage by way of comparison of the country's trade scenario with the world scenario. The basic assumption underlying the

concept of Revealed Comparative Advantage is that trade profile reflects the inter-country differences in terms of relative costs and non-price factors. As per Balassa's (1965) measure, Revealed Comparative Advantage (RCA) index for country i , of commodity j is

$$RCA_{ij} = \frac{(X_{ji}/X_i)}{(X_{jw}/X_w)}$$

Where,

X_{ji} : exports of commodity j from country i

X_i : total exports from country i

X_{jw} : total exports of commodity j from world

X_w : total exports from world

The RCA index ranges from 0 to infinity, with 1 as the break-even point. That is, an RCA value of less than 1 means that the product does not have a comparative advantage, while a value above 1 indicates that the product has a comparative advantage. The Normalized Revealed Comparative Advantage (NRCA) index has been demonstrated capable of revealing the extent of comparative advantage that a country has in a commodity more closely and consistently than other alternative RCA indices in the

literature. NRCA can be defined in the following manner-

$$NRCA_{ij} = \frac{(RCA_{ij} - 1)}{(RCA_{ij} + 1)}$$

NRCA ranges from -1 to 1 with 0 as the breakeven point. That is, an NRCA value of less than 0 and greater than -1, means that the product has no export comparative advantage, while a value above 0 and less than 1, indicates that the product has a comparative advantage. The extent of comparative advantage/disadvantage can be gauged from the proximity of the NRCA values to the extreme data points, viz. +1 and -1.

METHODOLOGY

The export competitiveness of Uttar Pradesh, as reflected in the NRCA value, has been mapped with changes in global demand. This has been undertaken with a view to outline a market specific approach for exporters. An analysis has also been undertaken with the objective of identifying products for which the State has existing capabilities to export. The current markets for these exports and the key competitors which India faces for these products in such markets have also been analysed. These products and markets are the potential export growth drivers for Uttar Pradesh and need to be suitably targeted. The section also attempts to identify the products where Uttar Pradesh could focus on, to realize potentially higher values, especially when considering that the State already possesses manufacturing

capabilities for these products. The objective is to construct a product market matrix for products in demand along with the major demand centres (importers), and the key exporters to these regions (competitors).

The analysis in this section considers two major determinants of Uttar Pradesh's performance in overseas markets, namely the NRCA for products at the State level, and the Annual Average Growth Rate (AAGR) for global imports at the overall and product level. On the basis of these considerations, a four quadrant bubble chart is prepared for product identification. The four quadrants imply the following:

- **Product Champions (Product Import AAGR > World Import AAGR; positive NRCA):** These products have the maximum potential, as the world import demand for these products has shown robust AAGR over the period 2012-2016, and Uttar Pradesh's exports of these products are competitive.
- **Underachievers (Product Import AAGR > World Import AAGR; negative NRCA):** Uttar Pradesh does not have competitiveness in these products, while their world import demand has grown significantly over the period under consideration. The State can strive towards increasing competitiveness in the identified products.

- **Declining Sectors (Product Import AAGR < World Import AAGR; negative NRCA):** Uttar Pradesh does not have competitiveness in these products, and these sectors have also registered weak global import growth during the period under consideration.
- **Achievers in Adversity (Product Import AAGR < World Import AAGR; positive NRCA):** Uttar Pradesh has competitiveness in these products, but the AAGR for imports of these products during 2012-16 is lower than the global import growth.

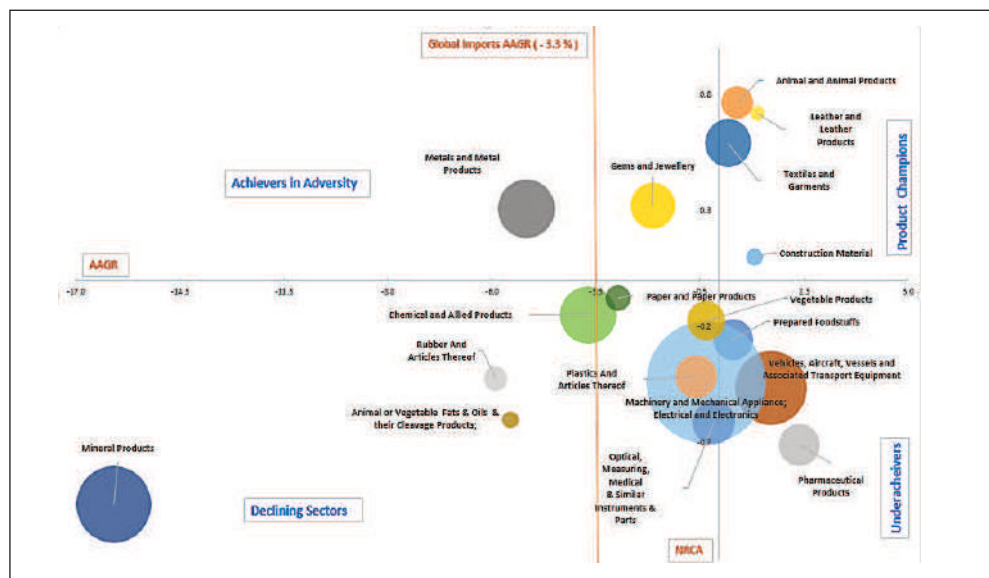
Given that the world imports recorded a negative AAGR of (-)3.3 per cent

during the period 2012-16, all products classified as Product Champions and having an AAGR greater than (-)3.3 per cent but less than zero, could be classified as Pseudo Product Champions, since at the global level, their imports have actually declined. The gems and jewellery sector falls under this category.

PRODUCT IDENTIFICATION BASED ON COMPETITIVENESS

In order to classify products based on the State's competitiveness in those products and the global demand, a four quadrant bubble chart has been used. The NRCA has been calculated and mapped against the AAGR of global imports of all products (denoted by the vertical orange line parallel

Exhibit 5.1: Identification of Promising Products for Exports from Uttar Pradesh



Note: Size of the bubble denotes the value of global imports of the product during 2016
Source: DGCIS, TradeMap; ITC; Exim Bank Research

to NRCA axis in Exhibit 5.1). The quadrants are drawn by comparing the overall AAGR of global imports for all products during 2012-16 (which was -3.3 per cent), to the NRCA of the products during the same period. This exercise aims to identify products whose imports over the period 2012-2016 have performed better than the global average for all products during this period, implying that the share of such products in the world import basket has witnessed an increase, a reflection of their rising demand and dynamism.

A total of 18 product groups (Annexure 2) have been considered for categorization based on a consolidation of the 99 products at HS 2 digit level of classification. Based on the methodology outlined above, 5 product groups have been identified under Product Champions, 8 product groups as Underachievers, 4 under Declining Sectors, and 1 product group under Achievers in Adversity (Exhibit 5.1). Animals and Animal Products, Leather and Leather Products, Construction Material, Gems and Jewellery and Textiles and Garments have been identified under the Product Champion category. These product categories fall in the quadrant representing positive NRCA, indicating competitiveness of Uttar Pradesh's exports; and a higher AAGR for imports than the world average for all products, reflecting positive demand sentiments. In case

of Gems and Jewellery, the AAGR of imports was negative at (-) 1.75 per cent, but the sector has still seen a faster import growth than world import AAGR of (-) 3.3 per cent during the same time period. Thus, within this category, it can be classified as a Pseudo Product Champion.

Prepared Food Stuffs, Vehicles, Aircrafts and Pharmaceutical products have an AAGR higher than the world average for all products, but negative NRCA. This shows that although there is a robust global demand for these products, Uttar Pradesh is not yet competitive enough in these sectors. Sectors like Plastics Products, Vegetable Products, Optical Measuring, Medical and Similar Instruments and Parts, and Machinery, all have recorded negative AAGRs for imports, but their AAGRs were better than the global average of (-)3.3 per cent across all product categories. Thus, if the State focusses on improving competitiveness and thereby its NRCA scores, these sectors can also emerge as promising sectors for realising the export potential of the State.

Product categorised as 'Achievers in Adversity', i.e. Metals and Metal Products, are sectors in which the State has competitiveness, but the slowing global imports in this sector is a cause of concern. For products that lie in the 'Declining Sectors' quadrant (Mineral Products and Animal or Vegetable Fats and Oils and their

Cleavage Products), neither does Uttar Pradesh have competitiveness nor have these products shown dynamism in import demand. Thus, there is a need to refocus resources away from these sectors and concentrate more on the promising ones categorised as 'Product Champions' and 'Underachievers'. The following section will therefore undertake a further analysis of products classified under these two heads.

Various parameters like world demand, top importers, value, share and rank of India in the global exports, along with the share of Uttar Pradesh and its major export destinations have been analysed for the 'Product Champions' category, as it is the most promising quadrant in terms of export potential. The analysis has been done at a granular level for each product classification. In the sector of animal and animal products (HS Code 01-05), most of the export destinations of UP are not the top importers of these products globally. The State can thus aim to tap the demand for these products in top importing countries like the USA, Germany, Japan and the Netherlands. In products like Meat Products and Dairy Products, the State has a high share in India's export (47.30 per cent and 9.15 per cent respectively). Strengthening its share further may entail strong focus on sanitary and phytosanitary standards prevailing in such discerning markets.

In case of exports of fish and related items, the State exports majorly to Nepal, due to logistical convenience given that Uttar Pradesh shares its border with that country.

In the category of Construction Material, the USA, Germany, the UK and France are the top importers in the world. India's share in world exports for this category is 2.8 per cent for HS Code 68 (articles of stone, plaster, cement, asbestos, mica or similar materials) and 2.1 per cent for HS Code 69 (ceramic products), while India's ranking in world exports for these products is 7 and 9, respectively. Uttar Pradesh accounted for 5.21 per cent and 2.39 per cent of the exports of these products, respectively, from India during 2016. In Gems and Jewellery, India had a share of 6.5 per cent in the world exports and ranked 4th in global exports during 2016. Uttar Pradesh has a 2.32 per cent share in India's exports of this product. The State's exports of Construction Material and Gems and Jewellery are already oriented towards the top exporters in the world.

Under the Textiles and Garments sector, the State has a high share in India's exports of products like Carpets, and Readymade Apparel. Uttar Pradesh is the biggest carpet exporting hub of the country, accounting for more than 40 per cent of India's exports of these products. The share of UP in apparel exports

(HS 61 and 62) is also substantial at more than 15 per cent. Another important product champion is the Leather sector. The State accounts for nearly 28 per cent of India's exports from this sector, and already exports to some of the major leather importing countries of the world.

An analysis of the top export destinations for Uttar Pradesh in the Product Champion categories, and the major importing countries in these categories highlight the need to focus more on key demand centres. Under categories such as Animal and Animal Products, as well as Textiles and Garments, the State's current export destinations for some of the HS Codes can be reoriented to match the demands and standards of the top importers of these goods, thereby increasing the State's export penetration globally (Table 5.1).

EXPORT POTENTIAL OF UTTAR PRADESH

The above analysis points out the product champions, i.e. sectors that hold a lot of promise for Uttar Pradesh in terms of enhancing its export. This section of the chapter attempts to estimate the untapped potential for Uttar Pradesh in these sectors. The export potential for these sectors has been derived from the Export Potential Map of the International Trade Centre (ITC) and

has been estimated by extrapolating the share of UP in India's exports of that sector (using data from DGCIS).

The Export Potential assessment methodology takes into consideration various factors like supply, demand, and the ease of trading while assessing country's potential exports of a product to a given target market. Trade between two countries is positively associated with the level of supply and demand and negatively associated with trade impediments in the form of customs duties or geographic distance. Export potential assessments combine these factors to identify products and sectors with export potential. Conceptually, export potential assessments are based on the assumption that in a world without frictions, trade flows can be described as a combination of supply performance, easiness to export and total demand. Select sectors from the product champion and underachievers category have been analysed to gauge the untapped export potential for the State.

Select product champion sectors such as meat, dairy (classified under animals and animal products); apparel, carpets (classified under textiles and garments), leather products, ceramic articles (classified under construction materials) and jewellery and precious metals have been shortlisted for the export

Table 5.1: Trade Indicators for Product Champion Groups

Classification	HS Code	HS Description	Top Importers	India's Exports to World in 2016 (USD million)	India's Share in World Exports (in per cent)	India's Ranking in World Exports	UP's Share in India's Exports in 2016 (in per cent)	Major Export Destinations for UP
Animal and Animal Products	01	Live Animals	The USA, Germany, Italy, The Netherlands	37.14	0.2	50	0.09	Nepal, Ghana, The UK, The USA, Mexico
	02	Meat and Edible Meat Offal	China, Japan, The USA, Germany	3972.06	3.5	10	47.30	Vietnam, Egypt, Indonesia, Algeria
	03	Fish and Crustaceans, Molluscs and Other Aquatic Invertebrates	The USA, China, Japan, Spain	5209.15	4.8	3	0.0002	Nepal
	04	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified	Germany, The Netherlands, Italy, France	279.67	0.4	37	9.58	Bangladesh, The USA, Pakistan, Nepal
	05	Products of animal origin, not elsewhere specified or included	The USA, Germany, Japan, China	91.88	1.1	18	6.57	Brazil, Albania, France, Germany
Textiles and Garments	50	Silk	Italy, India, Japan, Romania	90.68	4.2	3	1.31	UAE, Oman, The USA, Australia
	51	Wool, fine or coarse animal hair; horsehair yarn and woven fabric	China, Italy, Germany, Hong Kong	159.48	1.3	15	1.47	Malaysia, The USA, Thailand, Indonesia
	52	Cotton	China, Bangladesh, Vietnam, Turkey	6262.46	11.9	2	0.30	Nepal, The UK, Bangladesh, Peru

Classification	HS Code	HS Description	Top Importers	India's Exports to World in 2016 (USD million)	India's Share in World Exports (in per cent)	India's Ranking in World Exports	UP's Share in India's Exports in 2016 (in per cent)	Major Export Destinations for UP
	53	Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn	China, India, The USA, Turkey	414.29	9.9	4	0.25	The USA, France, The UK, Vietnam
	54	Man-made filaments; strip and the like of man-made textile materials	Vietnam, China, The USA, Turkey	1925.43	4.3	6	0.64	Germany, The USA, Malaysia, The UK
	55	Man-Made Staple Fibres	Vietnam, China, Turkey, The USA	2047.05	5.8	3	1.21	Iran, China, Belgium, Nepal
	56	Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof	The USA, Germany, China, Japan	431.721	1.8	14	2.60	The USA, Spain, France, Germany
	57	Carpets and Other Textile Floor Coverings	The USA, Germany, The UK, Canada	1736.93	12	3	40.48	The USA, Germany, UAE, The UK
	58	Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery	Vietnam, The USA, Hong Kong, China	361.22	3	10	1.61	The USA, Bangladesh, The UK, Italy
	59	Impregnated, coated, covered or laminated textile fabrics	The USA, China, Vietnam, Germany	207.87	0.9	23	4.10	The USA, Bangladesh, UAE, Australia
	60	Knitted or Crocheted Fabrics	Vietnam, Cambodia, Hong Kong, China	265.89	0.8	14	1.67	The USA, Bangladesh, UAE, Australia

Classification	HS Code	HS Description	Top Importers	India's Exports to World in 2016 (USD million)	India's Share in World Exports (in per cent)	India's Ranking in World Exports	UP's Share in India's Exports in 2016 (in per cent)	Major Export Destinations for UP
	61	Articles of apparel and clothing accessories, knitted or crocheted	The USA, Germany, Japan, The UK	7910.08	3.6	6	4.11	The USA, UAE, Germany, The UK
	62	Articles of apparel and clothing accessories, not knitted or crocheted	The USA, Germany, Japan, The UK	9051.09	4.2	5	11.22	The USA, Spain, UAE, Germany
	63	Other Made Up Textile Articles; Sets; Worn Textile Articles	The USA, Germany, Japan, The UK	4564.83	7.6	2	4.58	The USA, France, Italy, The UK
Construction Material	68	Articles of stone, plaster, cement, asbestos, mica or similar materials	The USA, Germany, The UK, France	1339.78	2.8	7	5.21	The USA, Australia, The UK, Sweden,
	69	Ceramic Products	The USA, Germany, France, The UK	1047.89	2.1	9	2.39	Oman, The USA, The UK, Germany
Leather and Leather Products	42	Articles of leather; saddlery and harness; travel goods, handbags and similar containers; articles of animal gut (other than silkworm gut)	The USA, Japan, Hong Kong, Germany	2345.80	3.2	6	27.78	The USA, Germany, France, The UK
Gems and Jewellery	71	Natural or Cultured Pearls, Precious or Semi-Precious Stones, Precious Metals, Metals Clad with Precious Metal, and Articles Thereof; Imitation Jewellery; Coin	Switzerland, China, The UK, Hong Kong	42290.72	6.5	4	2.32	UAE, The UK, The USA, Sweden, France

Source: TradeMap, DGCIS; Exim Bank Research

potential analysis. Underachiever sectors such as motor vehicle and parts, plastics, rubber, paper and paper products, machinery, optical and medical instruments, pharmaceuticals and vegetable products (products like tea, spices, cereals, vegetables and fruits) have also been included in the analysis. This analysis attempts to quantify the untapped export potential that the State can channelize through these products.

Sector such as Metal and Metal Products, which features under 'Achievers in Adversity' has also been included in the current analysis. This is the sector in which Uttar Pradesh is among the major exporting States and there still remains substantial untapped export potential, even though the global imports of these sectors has been declining. As the exports from the State are competitive in this sector, the analysis highlights the low hanging fruit that can be harnessed by the State.

Yet another sector that has been added is the Sports goods

sector, a niche sector that is not reflected in the analysis presented in Exhibit 1 (which is based on 2 digit HS Code Classification), but has been included in the current analysis as Uttar Pradesh is a major hub of Sports goods in India and the State is considering further development of the industry around the city of Meerut.

The products considered for export potential analysis accounted for more than three-fourth of the total exports of Uttar Pradesh in 2016. The export potential, actual exports, and untapped export potential for India in these product categories is calculated from the ITC database. The share of Uttar Pradesh in exports of comparable products categorised under Principal Commodity is calculated using DGCIS data for 2016¹⁹, and these shares are used to estimate the export potential at the State level. Based on this methodology, the untapped export potential of Uttar Pradesh in these identified sectors is estimated at USD 8.1 billion, nearly two-third the size of its current exports.

¹⁹Principal commodity categorization in DGCIS may not be strictly comparable with the ITC database, but can be used as a close proxy in absence of data at the State level in the ITC database

Table 5.2: Untapped Export Potential of Uttar Pradesh in its Major Exporting Sectors (US\$ Billion)

SECTORS	India			Uttar Pradesh	
	Export Potential (USD Bn)	Actual Exports (USD Bn)^	Untapped Potential (USD Bn)^^	Share of UP in Indian Exports	Untapped Export potential (USD Mn)
PRODUCT CHAMPIONS					
<i>Animal and Animal Products</i>					
Meat (except poultry)	5.2	3.4	2.9	47.0%	1363.0
Dairy	0.7	0.3	0.4	16.0%	68.8
<i>Textiles and Garments</i>					
Apparel (RMG)	27.3	15.6	13.2	8.0%	1056.0
Carpets	2.3	1.7	0.9	46.0%	391.0
Gems and Jewellery					
Jewellery & Precious Metals	64.8	35.7	29.9	3.0%	897.0
<i>Construction Materials</i>					
Ceramic Articles	1.5	0.7	1.0	2.9%	28.1
Cement, Clinkers & Asbestos related material^^^	1.4	1.2	1.0	0.5%	4.8
<i>Leather Products</i>					
Leather and Leather Products	5.8	3.3	3.0	28.0%	840.0
UNDERACHIEVERS					
Machinery	23.5	17.7	12.5	5.0%	625.0
Optical and Medical Instruments	2.6	2.3	1.4	4.0%	56.0
Plastic and Rubber	13.9	7.8	8.0	4.0%	320.0
Motor Vehicle and Parts	25.4	14.5	14.7	2.0%	294.0
Pharmaceutical Components	31.1	14.0	17.8	1.0%	178.0
Paper Products	1.7	1.4	0.9	6.5%	57.9
<i>Agricultural Products</i>					
Tea	2.0	0.7	1.3	1.2%	15.7
Cereals	1.4	0.8	1.1	1.4%	15.5
Vegetables	2.0	0.9	1.3	0.3%	3.9
Spices	3.6	1.4	2.2	8.8%	194.0
Fruits	1.8	0.6	1.3	0.2%	3.1

SECTORS	India			Uttar Pradesh	
	Export Potential (USD Bn)	Actual Exports (USD Bn)^	Untapped Potential (USD Bn)^^	Share of UP in Indian Exports	Untapped Export potential (USD Mn)
OTHER KEY SECTORS					
Sports Goods	0.6	0.3	0.4	24.8%	89.3
Metal & Metal Products	34.8	22.1	19.9	8.0%	1592.0
TOTAL					8093.2

Note: ^The value of actual exports is calculated by ITC as an arithmetic average of direct and mirror data of reliable reporters over the past five years. Actual exports to a region, including to the world as a whole, only include exports to markets where the country (India in this case) has export potential. Actual exports can therefore be equivalent to or lower than export values recorded in other trade databases, such as Trade Map.

^^This is the extent to which potential exports deviate from actual exports. Actual exports may be higher or lower than the expected potential value. When actual exports exceed potential exports, this can be driven by an exporter's exceptional export performance in some markets while neglecting others. Conversely, the untapped potential value, signals room for export growth if frictions, for example in the form of regulations or buyer-seller mismatches, can be overcome. This untapped potential is not simply the difference between the potential and actual exports.

^^^ The products considered under this sector comprise more than 90% of India's exports of HS 68 products.

Source: Export Potential Map; DGCIS; Exim Bank Research

6. REALISING THE EXPORT POTENTIAL OF UP: SELECT STRATEGIES

The preceding chapters have delineated the diverse production base of the State in primary, secondary and tertiary sectors, and highlighted the huge opportunity for garnering foreign exchange revenues from exports. There exists an untapped potential of more than USD 8 billion which can be realised through targeted interventions across various facets of the State economy. An export strategy will form the cornerstone for realising this potential, and in the process, help improve the competitiveness of UP.

While trade and commerce is a subject of Union List, the building blocks of developing and providing a conducive climate to such activities rest with the State Government. Hence, a strategic roadmap needs to be devised to provide impetus to the State's exports. This roadmap needs to factor in the sectors in which the State has competitive advantage and where global demand has remained robust and is expected to remain so in the foreseeable future. In order to boost the exports from Uttar Pradesh, an innovative approach needs to be adopted for identifying priority sectors and supporting them with an enabling ecosystem comprising adequate

infrastructure, skill and capacity development and business friendly policies, in a sustainable manner. The blueprint for promotion of exports from Uttar Pradesh would entail strategizing across various levels - both sectoral and institutional - in order to create this enabling environment.

GENERIC AND INSTITUTIONAL STRATEGIES

In order to develop the landlocked State of Uttar Pradesh as an exports hub, the State government would need to align its priorities and focus areas with the national and international demand trends and focus on maximizing benefits from bilateral and multilateral trade agreements made by the Centre.

Today, the global trade is highly unpredictable and dynamic, wherein various disruptions, competition and changing preferences can have both positive and negative impacts. In order to have a robust export strategy that transcends both domestic and international trade volatility, the industrial and economic infrastructure of the State must be revamped and modernized. Policy interventions such as integrating 'Make in UP' with the

broader 'Make in India' theme can boost manufacturing production and exports and go a long way in helping the State emerge as an export hub. Some focus areas for an overarching strategy towards boosting export potential of the State have been highlighted below:

Infrastructure

Robust infrastructure will be critical for providing forward and backward linkages to exporting units. It will be important to identify, create and promote logistics infrastructure which engenders exports. This includes airports, dry ports, container freight stations, Inland Container Depots (ICDs), warehouses, agro-warehouse, post-harvest processing facilities, packaging facilities, export product exhibition centre, food parks, textile parks, raw material banks for high quality raw materials, multi-modal logistics hubs, and specialized industrial zones viz. SEZs and State Investment and Manufacturing Zones.

In terms of industrial promotion initiatives, the State has classified mega investment projects into three categories — mega, mega plus and

super mega investment projects, and three regions — Paschimanchal (Western), Madhyanchal (Central) and Bundelkhand and Poorvanchal (Bundelkhand and Eastern)²⁰. Uttar Pradesh also has a considerable interest in the Delhi Mumbai Industrial Corridor (DMIC) and the Amritsar Kolkata Industrial Corridor. A strategic synergy between industrial infrastructure and export promotion bodies could boost the export potential of the State.

Improvements in road and rail network facilitates free movement of cargo from production site to the dry ports and ICDs. Hassle free transportation of goods plays an important role in boosting exports, especially for a landlocked state like Uttar Pradesh. Existing logistics infrastructure in the State includes Moradabad rail linked combined domestic and EXIM terminal, Rail linked private Freight Terminal and Inland Container Depot in Kanpur, ICD at Dadri Terminal and at Kanpur. Three multi modal logistics/transport hubs are proposed at Noida, Boraki and Varanasi. Other initiatives like development of the National Waterways -1 connecting Allahabad, Varanasi and Haldia sea port in

²⁰For western UP, while a mega project would invite an investment of Rs 200-500 crore or provide employment to over 1000 people, a mega plus project entails a capital investment of Rs 500-1000 crore or employment of more than 2000. Super mega projects would need investment of more than Rs 1000 crore or employment of over 4000. For central UP, mega is Rs 150-300 crore or 750 workers' employment, mega plus is between Rs 300-750 crore or 1500 workers employment and super mega is over Rs 750 crore or more than 3,000 workers' employment. For Bundelkhand and Poorvanchal regions, where capital investment of Rs 100 to Rs 250 crore would be regarded as mega project or 500 workers' employment, Rs 250-500 crore or 1000 workers' employment as mega plus and Rs 500 crore and above or over 2000 workers' employment coming as super mega category.

Kolkata; subsidy on export cargo sent by air and on freight charges on gateway port; upcoming Western Dedicated Freight Corridor that stretches from Dadri in Ghaziabad to Jawaharlal Nehru Port in Mumbai; and the Eastern Dedicated Freight Corridor (EDFC) between Dankuni in West Bengal and Dadri in UP can boost the transport infrastructure in the State. Uttar Pradesh has the highest geographical share of around 57% of EDFC, spread across 1,049 km to facilitate uninterrupted transportation of goods to sea ports. These initiatives are expected to substantially upgrade the infrastructure facilities, and shall bode well for the exports sector.

Capacity Building and Skill Development

Exporters, especially the micro and small enterprises, need to have in-depth knowledge of the latest developments pertaining to international trade including information on the various sources and types of export finance, insurance, packaging / eco-labelling, quality, etc. They should also acquaint themselves with the rules and procedures of importing countries. Hence, there is a need to conduct Workshops / Seminars / Conferences regularly on different aspects of international trade and across different sectors and venues in the State with the objective of sensitising the exporting community of the different facets of international trade.

A focused approach by the policy makers towards encouraging consistent quality, and eco-friendly methods in production, through adoption of Quality Management System and Environment Management System certification can give an edge to the exporters. A comprehensive inter-ministerial network can be built within the State, linking with Central institutions such as Agricultural and Processed Food Products Export Development Authority (APEDA), Export Promotion Councils, and India Trade Promotion Organization which would provide a holistic environment for technological upgradation and skill development.

From the perspective of skill development, State Universities can be encouraged to commence both vocational and research based courses in agro processing, bio-technology, application of information technology in agriculture and allied fields, etc. Efforts may also be taken to promote vocational courses for promotion of handicraft skills.

Export Awards

Currently, the State Export Award is given by the Government of Uttar Pradesh to outstanding exporters of the State across 25 sectors. In order to further encourage exporters and streamline the process, a consolidation of these 25 sectors into 10 broad sectors may be considered.

Within these sectors, awards can be provided under different categories such as innovative product, new market, quality product, quality manufacturing process etc. depending on the idiosyncrasy of respective sectors. Such segregation could also be done based on parameters like turnover (MSMEs, large units, grassroots business,) young promising companies, and women entrepreneurs. A selection committee comprising officials from key Government agencies and eminent industrialists can evaluate the applications, taking into consideration the value of exports, ratio of exports to sales, level of value addition, adoption of best practices, product and process innovation, R&D activity, etc.

The State Government can also initiate a 'Hidden Champions' initiative, to identify, encourage and felicitate promising small enterprises that have shown exemplary performance in exporting products through innovative practices. This can encourage innovation in the State economy. Under the Hidden Champions initiative, select companies could receive both financial and non-financial forms of assistance from the State. The Directorate of Industries may be mandated to shortlist SMEs, on pilot basis, with advanced technologies and high growth potential as Hidden Champion candidates and help them in their globalization efforts by providing customized

financial and non-financial services. The financial services could include credit for working capital, finance for R&D, quality upgradation and exports related funding (such as marketing, brand building etc). The non-financial services could include in-depth advisory and consulting services in areas like general management, forex risk management; training of working level staff; evaluating foreign potential buyers; and understanding the global market.

Geographical Indications

Geographical Indications (GI) of goods are defined as that aspect of industrial property which is definite to a geographical territory. It is used for agricultural, natural and manufactured goods. For a product to get GI tag, the goods need to be produced or processed or prepared in that region. It is also essential that the product has special quality or reputation. GI conveys an assurance of quality and distinctiveness which is essentially attributable to the fact of its origin in that defined geographical locality, region or country.

GI tags, thus, can help in boosting exports and ensuring both economic and social returns. The reference to geographical origin along with the use of traditional practices and processing methods, provides substantial marketing potential. GIs are considered important tools for marketing strategies, and function as

product differentiators. In order to reap the benefits of GI status, it is important for the GI brand to be recognized as a reliable and preferred brand in the market with a distinguished positioning.

GI acts as a signalling device helping the producers to differentiate their products from other competing products in the market and enabling them to build a reputation and goodwill around their products, which often fetch a premium price. GIs, thus, give a competitive advantage to producers and enable consumers to make more informed choices by providing clear information on origin-specific products and their characteristics. The preservation of this consumer trust is very important. Thus, the State Government must provide effective verification and controls at multiple levels in the supply chain, ensuring compliance with product specification before placing it in the market and monitor the use of the names to ensure legal compliance. GI products can not only emerge as a major product in the export basket but can also help in promotion of tourism and cultural heritage of the State.

Uttar Pradesh boasts of more than twenty GI tags in sectors ranging from handicrafts, agriculture and manufacturing. The entire list of GI products of UP is presented in Annexure 3. The logo and name of the GI brands need to be developed

and marketed, and a mechanism needs to be devised for ensuring that all the products marketed under the GI brand meet the minimum specified standards. Initiatives are also needed for identifying more products from the State which can be accorded with GI status. In this regard, a brand equity fund can be setup by the State Government under the aegis of the Department of Industries. This will be aimed at building globally competitive brands for products originating from the State. Some of its GI status products such as the carpets of Bhadohi and Mirzapur already enjoy huge popularity globally. The fund can also assist in marketing of these branded products in the international arena. Export related brochures, interactive CDs, etc. can be created for popularizing the products from the State in international markets.

Promoting E-commerce

Online opportunities in traditionally strong sectors such as apparel, gems and jewellery, handicrafts, carpets, etc. are yet to be tapped completely. While there are a significant number of fairs and exhibitions that the State artisans are exposed to, access through online platform is currently limited. An important step will be to create awareness among SMEs regarding online market place and customer relationship management. Effective marketing communications and brand building in this space will

be essential in effectively utilizing the channel.

Connecting SMEs directly to their markets and customers can aid the players in adapting to the changing market dynamics quickly. Especially in sectors such as textile, weavers' cooperatives are losing their relevance in an industry that is dominated by machine-made fabric. Handloom products take longer to make, and are more expensive because of higher costs of labour and raw material (a large portion of which is natural, not synthetic). It is also difficult for rural cooperatives to gain access to

lucrative urban and foreign markets. One of the biggest clients of handloom cooperatives is State Governments, which promote these products through government emporiums. However, lack of marketing initiatives, design and technical innovation and quality improvements mean a stagnant market and prices for these goods. Online marketplace for these products can substantially increase the reach of these products and fetch better prices for the producers. GoCoop is one such initiative in this direction which provides rural handloom weavers a platform to sell their products at market prices (Box 1).

Box 1: GoCoop – Promoting Handloom through e-commerce

GoCoop is an online marketplace which gives rural handloom weavers' cooperatives a platform to sell their products at market prices, directly to buyers across the world.

GoCoop works with more than 275 handloom weaver cooperatives across 10 states in India. They constitute 90 per cent of GoCoop's supplier base; the rest comprising individual weavers, other craft-based social enterprises and NGOs.

GoCoop processes around 3,000 online orders a month and clocked 100 percent year-on-year sales growth in FY15 and FY16. Nearly 70 per cent of its business is B2C (business-to-consumer), which constitutes its online sales, while the remaining is B2B (business-to-business), which is an offline component. As part of its B2B segment, GoCoop connects cooperatives to institutional buyers such as garment exporters and retailers in India, as well as fair trade retailers in Europe. Depending on the requirements of the buyer – volume, quality, design and price – GoCoop connects them with cooperatives that are best suited to fulfil the order. Due to its intervention, GoCoop is able to bypass two to three levels in the supply chain. A large part of the savings thus made accrues to the artisanal producers by way of better price realisations. In August 2016, GoCoop received a national award from the Ministry of Textiles for marketing of handloom products via ecommerce.

Cluster Development

Industrial clusters have been proven to have several advantages in promoting the growth of a particular sector or industry. It is recognized that enterprises can achieve high levels of competitiveness if they work in a cluster environment which engenders complementarities by provisioning of common facilities, and facilitating collective activities including collective sourcing and marketing.

The State of Uttar Pradesh has several industrial clusters spread across an array of sectors. The development and upgrading of clusters will be an important agenda for the State Government. As an essential first step, the State needs to develop a mechanism for assessment of existing clusters in the State. The assessment can cover aspects pertaining

to infrastructure bottlenecks, technological upgradation, access to skilled human resource, environmental sustainability, etc. Upon assessment of the clusters, relevant capacity building activities can be undertaken by the Government. The elements of capacity building include construction of common physical infrastructure, building institutions, development of human resources, etc. The State government's recent One District-One Product (ODOP) initiative is an attempt towards this cluster development approach in the State (Box 2).

Active Participation in Global Value Chains

The Global Value Chain (GVC) model breaks the product life-cycle into many tasks. The returns from the various stages of GVC can be

Box 2: One District One Product (ODOP) Scheme

The State Government's One District- One Product (ODOP) Scheme aims to promote popular products from each district of UP. Such a Scheme was firstly launched in 1979 by the Governor Morihiko Hiramatsu of Oita Province of Japan. After this, it was also adopted in the form of one tambon-one product in Thailand during the time of the then Prime Minister of Thailand, Thaksin Suvadthra. Apart from this, Indonesia, Philippines, Malaysia and China have also adopted this model.

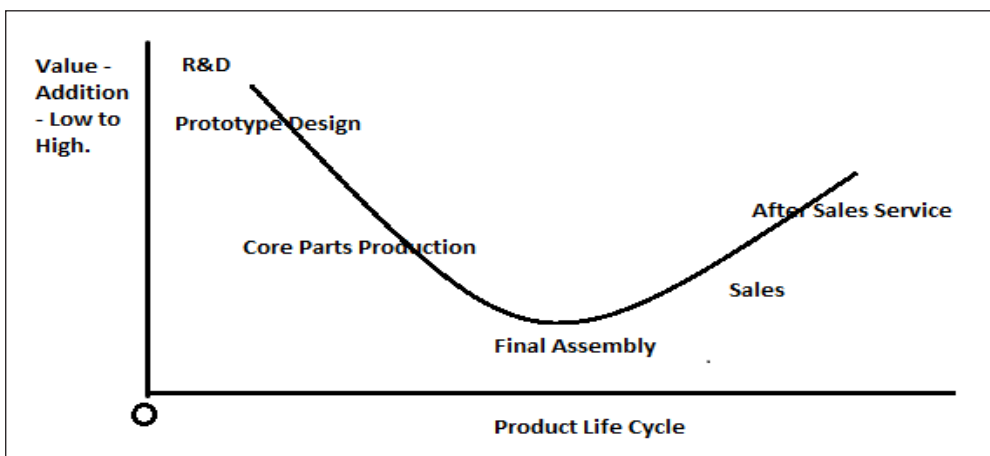
Given the special social, economic, cultural and geographical situation of the State, this model can be considered very useful for the inclusive development of the State. The Scheme has identified district wise major product clusters in Uttar Pradesh, for a wide range of products including handicrafts, carpets, sports goods, leather products and food processing areas. The list of the products and districts identified are in Annexure 4.

represented as a curve called the GVC Smile Curve (Exhibit 6.1). The logic of the GVC smile shape is that research and developmental activities for critical components of the large basket products, which basically refer to products which enjoy a large share in global imports²¹, occur early in the production process (left side of the figure). These knowledge activities tend to be high-value-added activities in GVCs and tend to require robust infrastructural and technical support. These activities reflect the high-value-added contributions. At the bottom point of the curve are the assembling activities reflecting low returns. The activities closest to the consumer are marketing, logistics, and after-product servicing that has higher returns than assembling, but not as high as innovation. The Uttar Pradesh Government can focus on developing production and export capabilities in

large basket products, and focusing on the high value added segments of the value chain. An exports basket that comprises products that belong to the large basket have higher chances to grow. The analysis carried out earlier in the study of identifying Product Champions and Underachievers reflects some such large basket products.

The major exports earnings of Uttar Pradesh originate from a small basket of products such as buffalo meat, jewellery, textiles and leather products among others. These goods form a small size of the global basket and thus it limits the potential for future growth. Also, most products face intense competition from other low-cost countries such as Bangladesh and Vietnam, especially in textiles products. The large basket products that offer scope for innovation and

Exhibit 6.1: GVC Smile Curve



²¹large basket products account for nearly 70 per cent of global imports

growth include products such as electronics, telecom, and high-end engineering products. The State can make an attempt to enhance its competitiveness in select 'Underachievers' products like Machinery and Mechanical Appliances, and Electrical and Electronics, amongst others and enter the value chain for these products which have exhibited strong global import demand. This would ensure higher export revenues and a positive outlook for future growth in exports.

An essential first step for GVC integration will be improvement in infrastructure. Inadequate trade infrastructure not only increases cost and time of export operations, but also affects participation in GVCs. For the State to enter these higher value products, faster movement of goods is a precondition as delay may disrupt the entire value chain. Thus, for the State to move up the GVC ladder and realise higher export potential, the trade infrastructure needs to be improved significantly. Apart from

robust trade infrastructure, the State could consider setting up globally accredited testing laboratories, and signing Mutual Recognition Agreements (MRA)²² with partner countries to facilitate its participation in the GVC.

Attracting FDI in the key high-tech sectors can also facilitate integration in global value chains. According to fDi Markets of the Financial Times²³, Uttar Pradesh attracted USD 13.67 Billion of FDI during January 2003 to January 2018, accounting for a share of nearly 3 per cent in India's total Greenfield FDI investments. This is significantly lower than the levels achieved by other key States. Maharashtra, for example, was the highest FDI recipient, attracting investments to the tune of USD 85.17 Billion during the same period.

However, it is encouraging to note that the top FDI receiving sectors of the State include high-tech sectors such as software publishers (except video games), communications

²²Mutual recognition agreements (MRA) lay down the conditions under which one Party (non-member country) will accept conformity assessment results (e.g. testing or certification) performed by the other Party's (the EU) designated conformity assessment bodies to show compliance with the first Party's (non-member country) requirements and vice versa. MRAs include relevant lists of designated laboratories, inspection bodies and conformity assessment bodies in both the EU and the third country. MRAs promote trade in goods between the European Union and third countries and facilitate market access. They are bilateral agreements, and aim to benefit industry by providing easier access to conformity assessment.

²³fDi Markets tracks cross-border investment in a new physical project or expansion of an existing investment which creates new jobs and capital investment. Joint ventures are only included where they lead to a new physical operation. The data on capital investment and job creation is based on the total investment the company is making at the time of the project announcement or opening. As companies can raise capital locally, phase their investment over a period of time, and can channel their investment through different countries for tax efficiency the data is different to the official data on FDI flows. The data from fDi Markets is more accurate and a real time indicator of the real investment that the companies are making in their overseas subsidiaries.

Table 6.1: Major Source Countries for FDI in India and UP

Sectors	Top Source Country (India)	Top Source Country (UP)	Share of UP in India's FDI
Software publishers, except video games	The USA, The UK, Germany, China , France	The USA, The UK, France, Japan, Germany	11%
Communications equipment	China, The USA, Finland , Taiwan, South Korea	China, Taiwan, South Korea, Hong Kong, The USA	13%
Semiconductors & other electronic components	The USA, Singapore , South Korea , Switzerland, Canada	The USA, Switzerland, The UK	12%

The countries marked in red are the ones which are the top source countries for India but have relatively low levels of investment in UP

Source: fDi Markets, Exim Bank Research

equipment, and semiconductors and other electronic components which attracted investments to the tune of USD 2056.1 Million, USD 1460.5 Million and USD 1425.7 Million, respectively. Improving the State's trade infrastructure, investing in brand building and promoting road shows might help the State in attracting higher FDI. The State can particularly focus on attracting investment from countries which feature among the top source countries for India as a whole, but have relatively low levels of investment in UP. These include countries like China in 'software publishers, except video games', Finland in 'communications equipment' and Singapore, South Korea and Canada in 'semiconductors and other electronic components'.

SECTORAL STRATEGIES FOR SELECT SECTORS

Meat Processing

The highest exported product from Uttar Pradesh is buffalo meat. Buffalo meat is among the triad of interlinked industries — dairy, meat and leather. The same buffaloes yield all three. Bovine meat has a high demand all over the world and offers a huge untapped export potential for the State. The abattoirs in the State are certified for quality and sanitary standards by meat-importing countries. They also fuel interlinked dairy (buffaloes yield more milk than cows and also fetch a higher price in the market) and leather industry, both of which feature as important industries in Uttar Pradesh.

Selected offals of the buffalos are used to make pet food, exported mostly to the EU. Leftover offals are processed and supplied as chicken and fish feed; the fat is used by cosmetics and soap manufacturers; the gelatine extracted from bones goes to pharmaceutical companies; the hides are sold to the leather industry and makers of cricket balls. In order to realise its export potential, the State needs to focus its efforts in upgrading slaughter houses to modern abattoirs with all basic and minimum hygienic standards requirements. In the present context of WTO agreement on Sanitary and Phyto-sanitary measures, the hygienic standards of existing meat plants need to be improved and made at par with the best in the world. Many male buffalo calves, due to inability of use in the dairy industry, are still slaughtered or starved at birth, wasting half the potential of the animal wealth. A very modest feeding subsidy for the initial few years can induce farmers to rear male buffalo calves for two years, and then sell them for meat and leather. Such measures are important to arrest the gap between male and female buffaloes, and avoid a future trade-off between milk and meat productions.

Foot-and-mouth disease (FMD) afflicts bovines today. There were 6 reported cases of FMD incidences/outbreaks in the State during 2015-16²⁴—the highest in the Northern region. The control measures for

FMD need to be strengthened and adequately controlled areas should be declared as disease free zones to stabilize export market by producing meat for export from such areas. There is a huge untapped potential which can be realized by adherence to animal health regulations. Indian exports of buffalo meat do not comply with health standards of many high-income markets, including FMD-free status. If Uttar Pradesh can be made free of the foot and mouth disease, exports can grow manifold in the markets of the US, the EU and China. The State must endeavour to declare itself FMD free. In this regard, the 'Foot and Mouth Disease Control Programme' should be strengthened, which is already underway in several districts of Uttar Pradesh.

Dairy Industry

Uttar Pradesh is amongst the highest milk producing States in the country. The State's comparative advantage lies in its large dairy herd, favourable climate, inland water resources and large farming sector. However, despite favourable conditions, the milk yield is far below that of other leading producers. It is imperative to develop proper production, processing and marketing infrastructure, which is capable of meeting international quality requirements. Since Uttar Pradesh has ample supply of buffalo milk, there can be a specialized

²⁴ICAR-Directorate on Foot and Mouth Disease

focus on buffalo milk based specialty products, like Mozzarella cheese, tailored to meet the needs of the target consumers.

A major challenge for the dairy industry of the State lies in maintaining the competitiveness by means of lower cost structures. Despite being a low cost producer of raw milk, the State lags behind in its efficiency to produce processed dairy products. Other challenges are the absence of remunerative prices, the lack of cold chain facilities for storage and transport of milk, and the inability to add value²⁵.

An integrated cooperative dairy development program on the proven model of Anand can be replicated for achieving higher competitiveness by the State at the global level. The State has already provisioned Rs 15 crore for setting up a Dairy Development Fund. The fund can be utilised for marketing of value added products like flavoured milk, butter, cheese, dairy whiteners etc. The program can also focus on modernizing the quality control laboratories in various districts to ensure globally acceptable standards. Only 12 per cent of the total milk produced in the State is currently processed in the organized sector to make milk products, against the national average of 17 per cent. The Government is contemplating

announcement of a Dairy Policy which would take this share to an ambitious 30 per cent during the next five years by attracting an investment of Rs 15,000 crore.

The new policy to promote export in the dairy industry needs to focus on the processed milk and dairy products. Initiatives such as exempting mandi fees on dairy processors, promoting private investment in infrastructure and industrial park development, simplification of various processes, resolving issues related to quality of dairy products and creating an IT enabled database with an aim to provide relevant market information to the industries in the State could be some promotional policies for the dairy industry. The amalgamation of IT based technology with the state of the art mechanisation can reap benefits for the dairy industry, as exemplified by Stellapps – Dairy Technology Solutions Company, which has significantly improved the productivity in dairy industry by leveraging Internet of Things (IoT), Big Data, Cloud, Mobility, and Data Analytics (Box 3). Research and development emphasis should be on development of efficient milk value chain to boost trade. On the quality front, the State must strive to establish its image as a reliable and consistent supplier of safe and quality dairy products conforming to the international standards.

²⁵Interview Excerpts on Dairy industry of UP by Chairman of Banas Dairy and Minister of State for health (independent charge) – Gujrat Government published in Hindu Business Line, June 21, 2017)

Box 3: Stellapps – Dairy Technology Solutions

Stellapps is one of India's Dairy Technology Solutions Company building automation tools integrated with cloud, mobility, and data analytics for dairy farms, cooperatives and private dairies. As an end-to-end initiative, Stellapps provides dairy farm optimization and monitoring services, with special focus on small and medium herd size farms (5 to 25 cows).

Stellapps has developed innovative applications and state-of-the-art mechanization tools which leverage Internet of Things (IoT), Big Data, Cloud, Mobility, and Data Analytics to improve various stages of the supply chain, including milk production, milk procurement, cold chain, animal insurance and farmer payments.

The company has developed an automatic milk production management system, 'SmartMoo', which enables small-scale cattle farmers to automatically manage milk production, storage, and data control, thus making it possible to increase their efficiency and profits.

The pricing of Stellapps, which includes the entire budget right from the infrastructure development to the milking and storage, is also competitive as compared to similar technology providers. Further, Stellapps follows the philosophy of working with the farmer where they make profits only when a farmer makes profit, thereby ensuring a win-win arrangement.

Within a short span of less than 5 years, Stellapps has installed one of the world's largest community milking parlors in Chikkaballapur district of Karnataka where 200 cows are milked per day. The technology developed by Stellapps also promotes rural entrepreneurship and fosters employment, leading to improvement in livelihood, thereby nudging the economy closer to the Sustainable Development Goals.

Handloom and Handicrafts Industry

The Handloom and Handicrafts industry is one of the top employment generating sectors of the State. Uttar Pradesh not only boasts of rich traditions of excellence in arts and crafts, its skills are internationally recognized and appreciated. The strength of this sector lies in its unmatched traditional aesthetic appeal and the employment generating potential it has at a relatively low

level of capital investment. It is also a highly export driven industry and efforts to reach out to the untapped markets could yield tangible results for the State. A skilled manpower base, traditional knowledge base and existing international presence are the factors in favour of this industry.

The State needs to focus on skill upgradation, modernization of production process, design development and quality upgradation

in this sector. Cluster development can reap significant benefits for the industry. Cluster development is better when the responsibility is given to the cluster members with a focus on enhancement of product design and delivery²⁶. The cluster approach may be further strengthened by establishing common facility centres or service centres to provide common services required by the handloom and handicrafts sector. This could include high capital-intensive equipment such as computerized quality control machine. The Moradabad SEZ which specialises in handicrafts is a successful example of such cluster based development model in UP, and can be replicated for other handicraft/handloom centres in the State. A positive initiative in the handloom sector has been the setting up of mega handloom cluster at Varanasi. The mega handloom cluster shall help weavers by way of technology up-gradation, product diversification, raw material bank, credit, market development, forward and backward linkages, human resource and skill development, social security, physical infrastructure, export and marketing, margin money for working capital, corpus fund for yarn depot, etc. More such clusters can be set up in the State with the assistance of Central Government, especially for handloom and handicraft product, given the decentralised model of production

that happens in the State in these sectors. Whilst the production could continue to be decentralised wherein the weavers could weave fabric at their respective houses giving them the flexibility to choose their time, the installation of additional looms at the cluster could give opportunities to weavers who either do not have looms installed at their homes or where the number of family members engaged in weaving outnumbers the number of handlooms. While the National Handloom Development Corporation, which is head quartered in Lucknow, does supply yarn for handloom fabrics, having a raw material bank in the cluster could mitigate the risk of price fluctuation of key raw materials like yarn and threads.

Carpets

The major challenges faced by this industry lies in the various infrastructural bottlenecks faced by the major carpet clusters particularly in the Bhadohi / Mirzapur belt in terms of facilities like uninterrupted electricity, water supply, roads, dry-port etc. The foremost strategies to boost the export potential of this sector includes improvement of road from Varanasi Airport to Bhadohi /Mirzapur town, upgrading the power supply situation and improving the working standards of the weavers. Other measures include providing looms to weavers,

²⁶USAID (2006), Haitian Handicraft Value Chain Analysis, USAID Micro Report # 68

setting up of mechanical processing centres for textile dyeing and washing, and improvement in the quality of dyes used for production. Revamping the labour norms and imparting training to women to increase their participation, can boost the production capabilities of the sector.

The key to meeting global demand will be adapting to the changing consumer needs and expectations with constant product diversification. The State has National Institute of Fashion Design at Rae Bareilly and several other private fashion technology institutes in Noida, Kanpur and Lucknow which can play an instrumental role in product upgradation. The State can establish a design centre to coordinate the process of developing latest designs, patterns, bringing newer dyeing technologies, colour combinations etc. Establishment of more State-promoted institutes of Design on the lines of the National Institute of Design can also help meet design development needs of the local industry. State-of-the-art laboratory for quality testing will also be crucial for producing high quality products. Proper publicity of local carpets, especially the Bhadohi carpets which holds a GI status and contesting of adverse publicity on the child labour issue will be essential for maintaining and enhancing the international reputation of the carpets.

In order to eradicate the incidence of child labour, the carpet industry in the

State has adopted a label “KALEEN”. This label on carpets ensures that no child labour has been used for the production of the carpet. The exporters are required to fulfil certain prerequisites to obtain this label. These prerequisites include contributing a percentage of the FOB value of their exports to the child welfare fund, ensuring education of the children along with a mid-day meal, medicare of the weaver families, vocational training of the children with assured stipend. Such strategies ensure maintenance of international reputation. More number of firms and clusters need to be encouraged to adopt the label. The State Government needs to create greater awareness about this model of compliance to social standards in the international markets.

Agro Processing

UP holds a prominent position in the agricultural sector of India in terms of its contribution to the total production of food grains, horticultural produce, milk and meat. This ample availability of raw produce, in addition to the huge market, low cost of production and human resource provide tremendous scope for establishing horticulture and food processing industry in the State. Currently, the State has multiple agro export zones to promote exports from this sector. These have been presented in Table 6.2.

Some more initiatives to boost the exports from horticulture, agro

Table 6.2: Agro Export Zones in Uttar Pradesh

Crops	District wise Agro Export Zones
Potatoes	Agra, Hathras, Farrukhabad, Kannoj, Meerut, Baghpat and Aligarh, Janpad Badaiyun, Rampur, Ghaziabad, and Firozabad
Mangoes and Vegetables	Lucknow, Unnao, Hardoi, Sitapur and Barabanki
Mangoes	Saharanpur, Muzaffarnagar, Bijnaur, Meerut, Baghpat and Bulandshahr, Jyotiba Phule Nagar
Basmati Rice	Bareilly, Shahjahanpur, Pilibhit, Rampur, Badaun, Bijnor, Moradabad, Jyotiba Phule Nagar, Sharanpur, Muzaffarnagar, Meerut, Bulandshahr, Ghaziabad and Baghpat

Source: APEDA

processing and food processing industry could be encouraging Mega Food Parks (like the ones notified in Nalgonda and Nizamabad districts), establishing new agro-warehouses, strengthening supply chains through provision of refrigerated vehicles/containers at reasonable rates for transportation to airports / ports, setting up cold chains and incentivising cold chains run on renewable energy, ensuring uninterrupted power supply, creation of infrastructure facilities for degree / diploma / certificates courses, food processing skill development programs, food testing, and standardisation laboratories, and providing financial assistance to new food processing units.

Appropriate post-harvest strategies can bode well for the processing segment. This includes mechanisation of harvesting and post-harvest handling, creation of common facilities

for packaging, incentivizing training of personnel in latest technology, adoption of modern techniques and gadgets that shall help meet quality standards of importing markets, as well as down-the-line operations, and creation of corridors for perishable commodities at all the airports and seaports. Specific strategies also need to be designed to incentivise the high return crops of the State, for example, technical assistance for improving the rose varieties grown near Aligarh and Etah.

Branding can also be an effective strategy for promoting exports from the State. The branding of three species of Mangoes of Uttar Pradesh (Dusshari, Chausa and Langra) under the brand name of "Nawab", has already proven to be a successful strategy in international markets. Similar approach could be adopted for marketing of processed foods from the State.

Leather Industry

The leather industry in Uttar Pradesh has suffered the brunt of decline in global demand for leather. A contributory factor could be the recent global slowdown. The industry should focus on markets which have witnessed a robust growth in demand during the recent period. This includes the countries such as the USA, Germany and the UK. These countries have witnessed a positive annual growth in imports in leather sector (HS Code 42) during 2012-16. These countries are also major leather markets, with their import share in the world being 18.9 per cent, 6.3 per cent and 5.0 per cent respectively in 2016.

According to the Council for Leather Exports, the country's leather industry is bestowed with an affluence of raw materials as India is endowed with 21 per cent of the world's cattle and buffaloes and 11 per cent of the world's goat and sheep population. It shall be important to maintain indigenous raw material availability so that manufacturers do not succumb to costly raw material imports which would affect their competitiveness.

Leather manufacturers producing environmentally sound products enjoy a competitive advantage in all business relations with the EU market and are also less likely to face action from the regulatory authorities in India such as National Green Tribunal. The State needs to boost awareness and

extend support to the manufacturers such that their products and production processes are not just competitive in traditional aspects like price, quality, customer demands, etc. but are also environmentally safe. Environmentally sound production would consequently open new market opportunities, and boost the sector's growth.

In order to match up to the environmental regulations, the State requires urgent investment in building city-wide effluent treatment plants linking all leather producers to curb the tannery pollution. Industry also needs to be encouraged to undertake research on finding alternates to Azo Dyes and Pentachlorophenol that have been banned in major import markets, due to their carcinogenic nature. It will also be important to ensure that the packaging material, along with the products must be reusable and recyclable.

The State Government, in association with industry associations should encourage usage of substitutes like Depson T for chrome tanning in order to make the industry more environment friendly. Incentives may also be given for firms that are manufacturing chemicals / dyes that comply with the environmental regulations.

The State's initiatives to improve the export potential of the industry includes proposal for abolition of Mandi Cess on raw leather, establishment of a branch of Central Leather Research Institute

at Jajmau, setting up of a Leather Complex with modern pollution control equipment and common facilities in the Kanpur-Unnao area, development of state-of-the-art testing laboratory for raw material and finished products as per international standards, proposed establishment of Prototype Development Centre at Kanpur under the aegis of National Small Industries Corporation, and expanding the coverage of UNDP-supported National Leather Development Programme to areas such as Agra and Kanpur.

Another important initiative to boost research in this industry has been the passing of The Footwear Design and Development Institute Bill, 2017, which provides for establishing and declaring the Footwear Design and Development Institute as an institute of national importance for promotion and development of quality and excellence in education in this area. Footwear Design and Development Institute (FDDI) has been given national level importance for promotion and development of quality excellence in education, research and training with the passing of the FDDI Act 2017. FDDI has only one campus in Noida. The State Government may endeavour to establish more such design and development institute for footwear in major footwear centres,

like Kanpur and Agra, upgrade footwear design to meet international standards and address the shortage of trained human resource in the sector.

Tourism

Tourism in Uttar Pradesh could be a major source of foreign exchange earnings, as also an enabler of infrastructure development and cultural exchange. The strategies for development of tourism sector in the State could focus on strengthening tourism transport systems, and ensuring adequate and comfortable hotels at affordable prices by promoting investments through fiscal and non-fiscal incentives.

Uttar Pradesh has a large number of historical monuments and places of religious significance. The State is one of the most popular and established tourist destination for both domestic and foreign tourists, and also has some of India's most visited sites—like the Taj Mahal, and holy city of Varanasi. Uttar Pradesh is an all-time favourite for foreign tourists, mainly due to the Taj Mahal in Agra, and also for the Buddhist Circuit in the State. In fact, the State recorded the third largest foreign tourist visits in India during 2016. The proximity of Agra to Delhi makes the historical city easily accessible to tourists.

Table 6.3: State-wise Foreign Tourist Arrivals (Number in Million)

S.No	State/UT	Foreign Tourist Visits in 2016	Foreign Tourist Visits in 2015	Foreign Tourist Visits in 2014
1	Tamil Nadu	4.72	4.68	4.66
2	Maharashtra	4.67	4.41	4.39
3	Uttar Pradesh	3.16	3.10	2.91
4	Delhi	2.52	2.38	2.32
5	West Bengal	1.53	1.49	1.38

Source: Tourism Dept. Reports of State Governments

The major challenges that the State faces in the tourism sector are inadequate support infrastructure at tourist destinations, inadequate cleanliness at tourist destinations including lack of clean public toilets, limited availability of certified tourist guides, limited availability of hygienic and quality eateries at tourist destinations, inadequate visitor management systems at sites, especially at religious destinations leading to lapses in conservation of Heritage Sites and harassment of tourists from touts and miscreants.

In order to tackle these challenges, the State can work in tandem with the Central Government for strengthening of tourism infrastructure and addressing impediments in tourism

sector. The State may further leverage the tourism centric schemes of Central Govt. like Swadesh Darshan²⁷, PRASAD²⁸, Hunar Se Rojgar Tak²⁹ etc to improve the tourism infrastructure. Under the plan scheme 'Swadesh Darshan' and 'PRASAD', the Ministry of Tourism provides Central Financial Assistance to State Governments/ Union Territory Administrations, for various tourism projects. Arrangements of special tourist trains for important tourist destinations/ festivals in close co-ordination with Indian Railways could ease, and raise the inflow of tourists into the State during festivals and holidays. Other key infrastructure also need to be strengthened in important tourist centres, and the State Government is committed towards this end. As of

²⁷Under the Swadesh Darshan scheme, thirteen thematic circuits have been identified, for development namely: North-East India Circuit, Buddhist Circuit, Himalayan Circuit, Coastal Circuit, Krishna Circuit, Desert Circuit, Tribal Circuit, Eco Circuit, Wildlife Circuit, Rural Circuit, Spiritual Circuit, Ramayana Circuit and Heritage Circuit.

²⁸Under the 'PRASAD' scheme the focus is on development and beautification of the identified pilgrimage destinations. Whereas, in the 'Spiritual Circuit' identified under the Swadesh Darshan scheme, the thrust is on development of particular thematic circuit consisting of various religious/spiritual destination in a State and Union Territory.

²⁹The Ministry of Tourism impart tourism and hospitality specific skills to young aspirants for the tourism sector.

Table 6.4: Select Potential Niche Tourism Opportunities in Uttar Pradesh

S.No	Tourism Segment	Potential Locations
1.	Ecotourism and Wildlife	Dudhwa, Katerniaghat, Pilibhit Tiger Reserve, Chambal WLS and other bird sanctuaries etc.
2.	Adventure Tourism / Aero Sports / Water Sports	Aero Sports- Devangana Valley (Chitrakoot), Kalinjar (Banda) Water Sports - Urmil Sagar (Mahoba), Charkhari (Mahoba), Gadhmau, Pahuj Dam, Baruasagar – Jhansi; Talbehat , Govindsagar, Jakhlaun, Sumera Talab – Lalitpur, Adventure/Camping – Deogarh
3.	Sports Tourism	F1Track Greater Noida, Golf course in Noida and Lucknow, Badminton Academy in Lucknow, International Cricket Stadium in Kanpur
4.	Cultural Tourism	Agra, Lucknow , Varanasi, Mathura etc.
5.	Crafts/Handloom and Textiles	Lucknow, Badhoi, Varanasi, Allahabad, Azamgarh, Kanpur, Agra, Bareilly, Moradabad, Saharanpur, Khurja, Pilkhua
6.	Rural Tourism	Agra, Lucknow, Varanasi, Azamgarh, Fatehpur Sikri
7.	MICE (Meetings, Incentives, Conferences and exhibitions) Tourism	Noida, Lucknow, Varanasi, Agra
8.	Medical Tourism	Noida, Lucknow
9.	Wellness Tourism	Varanasi, Agra,
10.	Film Tourism	Agra, Lucknow, Varanasi, Kanpur, Noida, Jhansi, Mathura, Vrindavan

Source: Uttar Pradesh Tourism Policy, 2016

March 2017, the holy cities Gorakhpur, Mathura, Ayodhya & Varanasi are slated to get 24 x 7 power supply, with a view to encourage tourism in the cities. With better administration and focus on development, a file index system has been started, making it compulsory to rectify power problems within a defined time period.

A Heritage Development Fund can also be set up for the maintenance and development of important heritage monuments and undeveloped tourist destinations. Funds for this purpose could be partly acquired through the Government Budget and cess on entry tickets to the various cultural sites and partly through participation

of the private sector as part of CSR activities.

In order to attract foreign tourists, Uttar Pradesh has bountiful products and array of attractions to offer. Though the foreign tourist arrivals are currently focused around destinations such as Agra and Varanasi, efforts need to be undertaken in order to take tourism to regional and lesser explored destinations. The State Tourism must focus on popularizing specialised and niche tourism products that serve a wide variety of tourists with different tastes and budgets, opens up new employment opportunities and incentivises the general public to conserve the natural flora and fauna of the State. Some of the niche tourism opportunities in Uttar Pradesh are highlighted in Table 6.4.

Initiatives like apps for tourists, digital marketing techniques and social media campaigns, announced in the Tourism Policy 2016, can support innovation and technological development in the tourism sector. These will be useful to inform and educate tourists on the uniqueness of the tourist destinations and available hospitality options, thereby enhancing the State's tourism attraction. To enhance its effectiveness, the app could be made available in foreign languages. Further, State-level awards instituted in the Tourism Policy 2016 can consider volume of foreign tourists catered as one of the assessment criteria for the

various award categories – best clean tourist destination, best new tourism project, best ecotourism project, best hotel, best transport operator, best tour operator, best travel agency, best restaurant providing local food etc.

IT and ITES Sector

Uttar Pradesh has emerged as a key hub for IT and ITeS industry and considering the changing business scenario, it can become one the top destination for the IT/ITeS industry. IT/ITeS industry is a highly export-oriented industry, with nearly three-fourth of the Indian IT industry's revenue accruing from exports. A robust IT environment can contribute towards promotion of software exports from the State.

The strategies in the IT/ ITES sector need to focus on facilitating all stages of IT/ITeS industry encompassing Start-ups/entrepreneurs, MSMEs and large players by providing a conducive policy framework and appropriate fiscal and non-fiscal incentives.

The Government of Uttar Pradesh should encourage the establishment of Centres of Excellence in specialised fields like BigData, Cloud Computing etc. across the State to promote R&D, innovation and transfer of technology. The transfer of technology can be through prominent IT industry experts or in collaboration with leading institutions like IIM Lucknow, IIT Kanpur, IIIT Allahabad, IIT-BHU, and

other reputed institutions. The State can also establish Skill Development Centres on a PPP model in the State to encourage youth from UP to improve their capabilities and enhance employability in the IT/ITeS domain. These centres can be established in collaboration with IT/ITES Companies and educational institutions.

The 'Plug n Play Model' based Incubation centre facility launched in Ghaziabad and Lucknow under the IT UPVAN initiative, to encourage start-ups, and provide a conducive growth environment to them can also be expanded to other cities. Diversification of IT/ ITeS sector to more locations within the State can also reap substantial benefits for the State economy. Already, the Government has taken several steps in this direction. Rural incubation centres known as e- SETU Centres are being setup at 13 district level centres in association with leading IT/ ITeS Companies to provide technical training, skill development and establishing entrepreneurial support ecosystem in the State of Uttar Pradesh. As per the Budget 2016-17, the State Government has decided to establish around 12 polytechnics related to IT in the State during 2016-17. Under a special programme, HCL Technologies will hire 200 persons with an annual family income less than Rs. 1 lakh in Uttar Pradesh, and impart specialized training in the IT sector. Such initiatives may contribute

towards expansion of the IT/ITES sector from northern UP to other parts of the State.

Conclusion

India expects to increase its share in world merchandise exports. Contribution from various States would form the bedrock of achieving a higher share in global exports. In order to contribute towards the increase in share and fructify this vision, it will be essential for Uttar Pradesh to focus on enhancing trade competitiveness, promoting innovation, bolstering availability of export finance, and strengthening the institutional capacity for exports, among others.

Uttar Pradesh is a large state with immense possibilities which can be harnessed through proactive steps and strategies of the State Government. As identified in the Study, the State has an untapped export potential of more than USD 8 billion, which can be harnessed through appropriate short and medium term measures, some of which have been outlined above. In the short term, the Government can focus on increasing exports in the 'Product Champions' category, which are essentially the low hanging fruits. Over the medium term, enhancing competitiveness in other segments identified in the Study as 'Underachievers' through pragmatic and proactive strategy and support can bode well for the exports sector of UP. The State should also

attract investment in key large basket products, which feature among the 'Underachiever' category.

An accelerated across-the-board engagement will be required for strengthening the State's export base. Given the diversified export basket of Uttar Pradesh and its landlocked position, there is need for robust logistical network. Further, availability of skilled and productive human resources across various export segments will also be critical. Moreover, the dependence of the State on developed markets such as the USA, the UK, and Germany, and on products such as meat and dairy products, necessitates streamlining of standards and quality assessment system. The role of Government will be crucial in undertaking these structural changes.

The State must also relentlessly push its branding and export promotion campaign for further boosting exports growth. In this regard, branding and marketing of GI status products need special emphasis. Compliance to social standards should also be

highlighted through adoption of labels such as 'Kaleen'. For export promotion and increasing market access, e-commerce platforms can also be leveraged.

Apart from these generic strategies, specific initiatives may also be undertaken to alleviate challenges in high potential sectors. For example, establishment of a design centre can help the carpet industry in adapting to the changing consumer needs. In the tourism sector, niche tourism opportunities can be encouraged to take tourism to lesser explored destinations. In case of meat exports, the State could focus on strengthening the 'Foot and Mouth Disease Control Programme'.

The aforementioned strategies focusing on creating an enabling environment across sectors, as also for capacity building in sectors identified in this study could help the State potentially reach exports of USD 30 billion by 2023 (next five years), thereby imparting a renewed energy and momentum to the export growth story of Uttar Pradesh.

Operational SEZ of Uttar Pradesh as on 30.04.2017

S. No	Name of the SEZ	Location Type of SEZ	Type
1	Noida Special Economic Zone	Uttar Pradesh	Multiproduct
2	Wipro Ltd	Greater Noida, Uttar Pradesh	IT/ITES
3	Moser Bear India Ltd.	Greater Noida, Uttar Pradesh	Non-Conventional Energy including Solar Energy equipment
4	Ansal IT City and Parks Ltd	Greater Noida, Uttar Pradesh	IT/ITES
5	Seaview Developers Ltd.	Greater Noida, Uttar Pradesh	IT/ITES
6	HCL Technologies	Greater Noida, Uttar Pradesh	IT/ITES
7	NIIT Technologies Limited SEZ	Greater Noida, Uttar Pradesh	IT/ITES
8	Aachvis Softech Pvt. Ltd. (Formerly Falcon Commercial Developers Limited)	Plot No. 7, Sector 144, Noida, Uttar Pradesh	IT/ITES
9	Arshiya Northern FTWZ Limited	Village Ibrahimpur, Junaidpur Urf, Moujpur, Bulandshar, Uttar Pradesh	FTWZ
10	Artha Infratech Private Limited	Plot No. 21, Sector Techzone-IV, Greater Noida, District Gautam Budh Nagar, Uttar Pradesh	Electronic Hardware & Software including IT/ITES
11	HCL IT City Lucknow Private Limited	Village Kanjehara & Mastemau, Chack Gajaria Farms, Sultanpur Road, Lucknow, Uttar Pradesh	IT/ITES
12	Moradabad SEZ	Moradabad, Uttar Pradesh	Handicrafts

Source: Ministry of Commerce and Industry, Dept. of Commerce

Classification of Products

Category	HS Code	HS Description
Animal and Animal Products	1	Live animals
	2	Meat and edible meat offal
	3	Fish and crustaceans, molluscs and other aquatic invertebrates
	4	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified
	5	Products of animal origin, not elsewhere specified or included
Animal Or Vegetable Fats & Oils & Their Cleavage Products	15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats
Chemical and Allied Products	28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals
	29	Organic chemicals
	31	Fertilisers
	32	Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring
	33	Essential oils and resinoids; perfumery, cosmetic or toilet preparations
	34	Soap, organic surface-active agents, washing preparations, lubricating preparations
	35	Albuminoidal substances; modified starches; glues; enzymes
	36	Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations
	37	Photographic or cinematographic goods
	38	Miscellaneous chemical products
Construction Material	68	Articles of stone, plaster, cement, asbestos, mica or similar materials
	69	Ceramic products

Category	HS Code	HS Description
Gems and Jewellery	71	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad
Leather and Leather Products	42	Articles of leather; saddlery and harness; travel goods, handbags and similar containers
Machinery and Mechanical Appliance; Electrical and Electronics	84	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof
	85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers
Metals and Metal Products	72	Iron and steel
	73	Articles of iron or steel
	74	Copper and articles thereof
	75	Nickel and articles thereof
	76	Aluminium and articles thereof
	78	Lead and articles thereof
	79	Zinc and articles thereof
	80	Tin and articles thereof
	81	Other base metals; cermets; articles thereof
	82	Tools, implements, cutlery, spoons and forks, of base metal; parts thereof of base metal
	83	Miscellaneous articles of base metal
Mineral Products	25	Salt; sulphur; earths and stone; plastering materials, lime and cement
	26	Ores, slag and ash
	27	Mineral fuels, mineral oils and products of their distillation; bituminous substances
Optical, Measuring, Medical & Similar Instruments & Parts	90	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments
Paper and Paper Products	48	Paper and paperboard; articles of paper pulp, of paper or of paperboard
	49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts

Category	HS Code	HS Description
Pharmaceutical Products	30	Pharmaceutical products
Plastics And Articles Thereof	39	Plastics and articles thereof
Prepared Foodstuffs	16	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates
	17	Sugars and sugar confectionery
	18	Cocoa and cocoa preparations
	19	Preparations of cereals, flour, starch or milk; pastry cooks' products
	20	Preparations of vegetables, fruit, nuts or other parts of plants
	21	Miscellaneous edible preparations
	22	Beverages, spirits and vinegar
	23	Residues and waste from the food industries; prepared animal fodder
	24	Tobacco and manufactured tobacco substitutes
Rubber And Articles Thereof	40	Rubber and articles thereof
Textiles and Garments	50	Silk
	51	Wool, fine or coarse animal hair; horsehair yarn and woven fabric
	52	Cotton
	53	Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn
	54	Man-made filaments; strip and the like of man-made textile materials
	55	Man-made staple fibres
	56	Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof
	57	Carpets and other textile floor coverings
	58	Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery
	59	Impregnated, coated, covered or laminated textile fabrics

Category	HS Code	HS Description
	60	Knitted or crocheted fabrics
	61	Articles of apparel and clothing accessories, knitted or crocheted
	62	Articles of apparel and clothing accessories, not knitted or crocheted
	63	Other made-up textile articles; sets; worn clothing and worn textile articles
Vegetable Products		
	6	Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage
	7	Edible vegetables and certain roots and tubers
	8	Edible fruit and nuts; peel of citrus fruit or melons
	9	Coffee, tea, maté and spices
	10	Cereals
	11	Products of the milling industry; malt; starches; inulin; wheat gluten
	12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal
	13	Lac; gums, resins and other vegetable saps and extracts
	14	Vegetable plaiting materials; vegetable products not elsewhere specified or included
Vehicles, Aircraft, Vessels and Associated Transport Equipment	86	Railway or tramway locomotives, rolling stock and parts thereof; railway or tramway track fixtures
	87	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof
	88	Aircraft, spacecraft, and parts thereof
	89	Ships, boats and floating structures

Source: DGFT; Exim Bank Research

GI Products from Uttar Pradesh

S. No.	Geographical Indication	Type
1	Allahabad Surkha	Agricultural
2	Lucknow Chikan Craft	Handicraft
3	Mango Malihabadi Dusseheri	Agricultural
4	Banaras Brocades and Sarees	Handicraft
5	Banaras Brocades and Sarees (Logo)	Handicraft
6	Handmade Carpet of Bhadohi	Handmade Carpets
7	Agra Durrie	Handicraft
8	Farrukhabad Prints	Handicraft
9	Lucknow Zardozi	Handicraft
10	Kalanamak Rice	Agricultural
11	Firozabad Glass	Handicraft
12	Kannauj Perfume	Manufactured
13	Kanpur Saddlery	Manufactured
14	Moradabad Metal Craft	Handicraft
15	Saharanpur Wood Craft	Handicraft
16	Handmade Carpets of Mirzapur	Handmade Carpets
17	Handmade Carpets of Banaras	Handmade Carpets
18	Agra Petha	Sweets
19	Mathura Peda	Sweets
20	Nizamabad black clay pottery	Handicraft
21	Varanasi Wooden Lacquerware & Toys	Handicraft

List of Products Identified in each District under ODOP

S. No.	District	Product
1.	Agra	Leather
2.	Aligarh	Locks and Hardware
3.	Allahabad	Fruits Processing (Guava)
4.	Ambedkarnagar	Power Loom
5.	Amethi	Biscuits
6.	Amroha	Musical instruments
7.	Auraiya	Food Processing (Desi Ghee)
8.	Azamgarh	Black Paatri
9.	Badaun	Zari Zardosi
10.	Baghpath	Home Furnishings
11.	Bahraich	Wheat stalks
12.	Baliya	Bindi
13.	Balrampur	Food processing (Daal)
14.	Banda	Sager stone craft
15.	Barabanki	Scarf
16.	Bareilly	Jari Work
17.	Basti	Wood Craft
18.	Bhadohi	Dari and Kalleen
19.	Bhagpat	Handloom
20.	Bijnor	Wood Carving
21.	Bulandsahar	Patari (Khuraza)
22.	Chandauli	Jageery Products
23.	Chitrakoot	Wooden Toys
24.	Deoria	Decorative Products
25.	Etawah	Textile Products

S. No.	District	Product
26.	Eata	Brass Bell
27.	Faizabad	Jaggery Products
28.	Farukhabad	Block printing
29.	Ferozabad	Glass bangles
30.	Gautambudh Nagar	Ready Made Products
31.	Gazipur	Wall hanging Items
32.	Ghaziabad	Engineering goods
33.	Gonda	Food processing (Daal)
34.	Gorakhpur	Terracotta
35.	Hamirpur	Shoes
36.	Hapur	Home Furnishing
37.	Hardoi	Dairy product
38.	Hathras	Ashing processing
39.	Itawa	Food processing (Potato products)
40.	Jallon	Handmade Papers
41.	Jhansi	Soft toys
42.	Kannoj	Perfume and chicken
43.	Kanpur Dehat	Utensils
44.	Kanpur Nagar	Leather products
45.	Kashganj	Jari and Jardozi
46.	Koshambi	Fruits Processing (Banana)
47.	Kushinagar	Artifacts
48.	Lakhimpurkhiri	Tribal craft
49.	Lalitpur	Lord Krishna statue
50.	Mahoba	Gora stone craft
51.	Mahrajaganj	Furniture
52.	Mainpuri	Tarakashi
53.	Mathura	Bathroom fittings

S. No.	District	Product
54.	Mau	Power loom
55.	Meerut	Sports Goods
56.	Mirjapur	Dari and Kalleen
57.	Muzaffarnagar	Jageery products
58.	Muradabad	Metal craft
59.	Oarayia	Desi Ghee
60.	Pilibhit	Flute
61.	Pratapgarh	Fruits Processing (Gooseberry)
62.	Raibareli	Woodcraft
63.	Rampur	Page work
64.	Saharanpur	Wood carving
65.	Sambhal	Horn and Bone
66.	Sant Kabir Nagar	Brass Pot
67.	Shahjahanpur	Jari Work
68.	Shamali	Hub and axel
69.	Siddhartnagar	Food Processing (rice)
70.	Sitapur	Dari
71.	Sonebhadra	Kalleen
72.	Sultanpur	Furniture of Beam
73.	Unnab	Jari
74.	Varanasi	Silk Products
75.	Zoanpur	Pressure Cookers

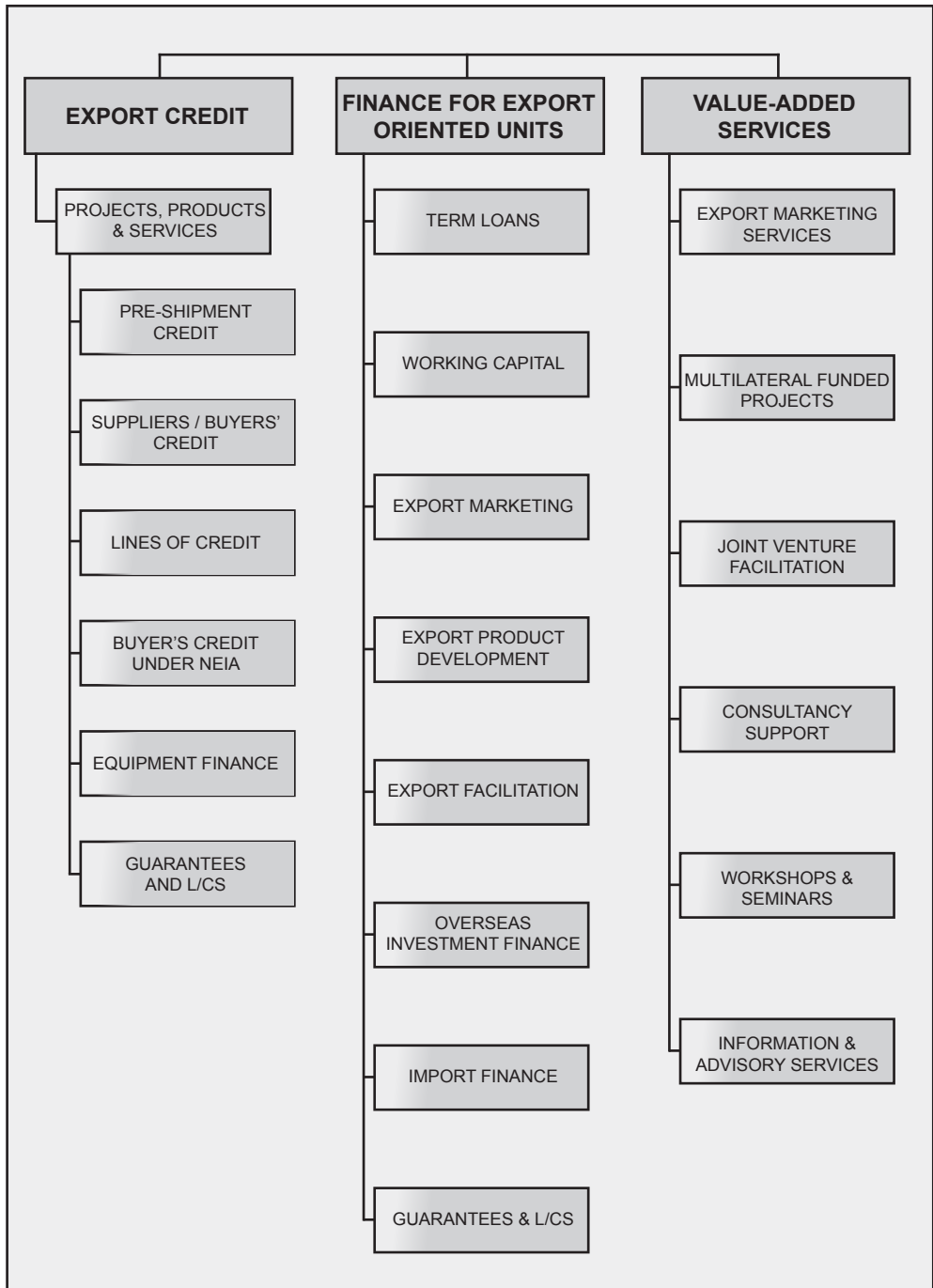
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