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EXPORTS FROM PUNJAB: TRENDS, OPPORTUNITIES, AND POLICY INSIGHTS

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Macroeconomic Profile

The GSDP of Punjab, at constant 2011-12 prices, witnessed a consistent and gradual increase from ₹ 3 trillion in 2013- 14 to ₹ 3.7 trillion in 2017-18, thereby recording an average annual growth rate (AAGR) of 5.6%. This growth has mostly been driven by the tertiary sector. The growth registered by the tertiary sector in each of the last five years has been greater than 6.5%. However, Punjab's share in the India's GDP has decreased from 3.1% in 2013-14 to 2.9% in 2017-18.

Export: Performance and Potential

Given its size and geography, Punjab has been performing decently on the export front. As per the latest data available, the State ranked 13th on the exports ranking table, with a share of 1.95% in the country's exports, with exports amounting to US$ 5.8 billion in 2017-18.

Export Target

Indian economy, at present, has the capacity to put itself in a promising position at the global platform. Given that, Punjab, after experiencing a dip in its exports, is looking towards a recovery path, the State has an opportunity to play significant role in meeting India's overall export targets. Under a 'Business as Usual Scenario', Punjab's exports would continue to grow at the rate of 9.7% (growth rate in 2017-18 over 2016-17) year-on-year for the next 5 years, and the State may end up achieving US$ 9194 million of merchandise exports by 2022-23. Further, India expects to achieve a merchandise export target of approximately US$ 666 billion by 2024-25. To achieve this target, India will have to register a CAGR of 12.3%, from the base level of 2017-18 figure. Therefore, under an optimistic scenario, if Punjab's exports grows in tandem with India's desired export growth of 12.3%, Punjab's exports in 5 years would touch US$ 10.3 billion by 2022-23. However, in a practical course of action, India is expected to progress well in its export target of US$ 1 trillion by 2024, complemented by the recovery of global economy. As a result, Punjab should easily be able to achieve an export target which ranges from US$ 9.2 to US$ 10.3 billion. It may also be noted that if Punjab also focuses on increasing its share in Indian exports, and is able to at least reach level achieved in 2013-14 (share of 2.24% - highest in the recent times), the State can achieve exports worth US$ 11.8 billion in 2022-23.

Current Scenario

The exports from Punjab reached a figure of US$ 5.8 billion in 2017-18, down from exports valued at US$ 7.1 billion in 2013-14, registering a negative AAGR of 4.4%, during this period. The top 10 principal commodities from Punjab accounted for 67.1% of the exports in 2017-18, down from 70.5% contribution by the top 10 principal commodities in 2013-14, signifying a decrease in the exported products' concentration. The top exported principal commodity was 'rice- basmati' with a contribution of over 17% in the total exports in 2017-18. This was followed by 'cotton yarn' (10.3%); 'products of iron and steel' (7.7%); 'RMG manmade fibres' (5.7%); and 'buffalo meat' (5%).

A destination wise analysis of exports from Punjab reveals that whilst the top 10 exporting destinations in 2013-14 contributed 58.5% to Punjab's exports, the contribution by the top 10 destinations was 54.5% in 2017-18, signifying diversification of export destinations. The major export destinations for Punjab in 2017-18 were USA (11.4%); UAE (10.4%); Iran (6.4%); Bangladesh (5.6%); and Saudi Arabia (5%).

The study, in order to focus on relevant products, categorized 3623 items at the HS 6 digit level into four categories, namely, 'Product Champions'; 'Underachievers'; 'Growers in sectors with declining imports'; and 'Losers in sectors with declining imports'. A total of 349 items fell into the category of the product champions (PCs). The combined exports of these items were US$ 4.2 billion in 2017, representing approximately 74% of Punjab's exports

in 2017. The highest number of products were in the category of underachievers at 1841 with exports worth US$ 0.26 billion. This was followed by 'Growers in sectors with declining imports' (GDIs) which were 301 in number, with exports amounting to US$ 1.1 billion.

In order to identify Product Champion sectors, the Study adopts the methodology of aggregating the 349 Product Champions identified at 6 digit HS code level to 59 products at 2 digit HS code. Subsequently, out of these 59 consolidated product list, the top 10 products at 2 digit HS code are considered for further analysis. These 10 products are analysed in detail and for each 2 digit product group, the Study takes the top five 6-digit items to undertake deeper analysis, which totals to 48 PCs at 6 digit level.

Investment Scenario

According to the Centre for Monitoring Indian Economy (CMIE) States of India database, new projects worth ₹207.9 billion were announced in Punjab in 2017-18, which represents a huge increase over 2016-17, when projects worth ₹44.6 billion were announced. There were 60 new projects that were announced in 2017-18, signifying substantial investments in each project. In 2016-17, 54 number of projects were announced. In 2017-18, projects worth ₹2167.9 billion were outstanding, of which projects to the tune of ₹1274.6 were under implementation. In fact, the percentage of projects under implementation within the total projects outstanding has decreased from 71.1% in 2013-14 to 58.8% in 2017-18.

Further the fDi markets database shows that, during 2008 to 2017, Punjab accounted for 1.0% of the estimated number of projects and 1.4% of the estimated total envisaged foreign capex (EFC, here after) in India. During the same period, Punjab accounted for 1.6% of the estimated total EFC in India in the category 'New Projects' (the other two categories are 'Expansion' and 'Co-location'). During this period, the State was host to 81 envisaged projects by 60 companies, which together accounted for about 26,800 jobs. The capex envisaged in these projects amounted to US$ 5.9 billion, averaging to about US$ 72.5 million per project.

As far as the number of projects are concerned, the United States expressed the highest number of projects for capex investment into Punjab at 30, which was more than one-third of the total number of projects envisaged in the State during 2008 to 2017. The top 10 source countries accounted for over 90% of the envisaged projects, with the US (37.0%) and Germany (12.3%), together accounting for approximately half the number of projects. With respect to the amount of EFC during 2008 to 2017, the UK leads the way with almost US$ 1.8 billion EFC in Punjab, equivalent to 30.4% of the total EFC to the State, during this period. The top 10 sources accounted for 96% of the EFC to Punjab, with the UK and the US together accounting for 58%.

The Study also used the RCA methodology in context of EFC for identifying key target sectors for inward investment. The analysis was undertaken at the sub-sectoral level for the cumulative time period during 2003 to 2017 and was further analysed in 3 phases to mitigate any possible aberrations. The three phases chosen were 2003-2007; 2008-2012; and 2013-17. The RCA methodology for inward investment was applied on 52 sub-sectors for 3 parameters, namely, capital envisaged; number of projects; and jobs created.

Strategies

Focused export sectors

The Study lists down 48 product champions at HS-6 digit level, which represent 78.4% of the exports of all the product champions. The products have not only witnessed robust demand in the international market over the last 5 years – and are likely to follow the increasing trend going forward – but have also been the ones where Punjab has exhibited increasing export competitiveness.

Attracting export oriented FDI

In order for Punjab to achieve an export target of over US$ 10 billion in the next 5 years, an important component will be to attract the FDI, especially those that bring exports. Achieving this objective would

entail not only encouraging foreign companies to participate in the 'Make in India' initiative in Punjab but also incentivise foreign companies to invest into high-technology sectors, especially those that are a part of the Global Value Chains (GVCs).

For most of the sectors identified for the purpose of attracting FDIs, Punjab has clearly lagged behind when compared to its neighbouring States. There have been some sectors such as electronic components; semiconductors; business machines and equipment; aerospace; engines and turbines; biotechnology; and space & defence, where Punjab has not been able to attract even a single project with foreign capital commitment over the past fifteen years. Some of these sectors not only have a tendency to increase exports but are also considered as huge job creators. Here, the State government can identify select cities in Punjab and undertake a focused and dedicated approach by creating a sector specific environment to attract the FDI in these segments.

Exploring India-Pakistan trade

Although the existing levels of trade may sound reasonable, it is vital to note that there exists a trade potential of more than US$ 10 billion between India and Pakistan. As per a study by Indian Council of Research on International Economic Relations (ICRIER) in 2007, a bilateral trade potential of US$ 11.7 billion existed between India and Pakistan, conditional on the appropriate measures taken by the governments of both the nations.

Central and State Governments of both the nations can indulge in dialogue and undertake various steps to use the untapped trade potential. Further, India can explore the unexplored channels such as electricity, for trade with Pakistan. As per a Study by IIM Ahmedabad done in 2016, “Tariff and related matters: The electricity sector in Punjab” Punjab, which has a massive ₹1.34 lakh crore debt, can utilize the border to substantially increase its annual revenue collection.

Agriculture

Punjab which has been at the forefront of Green Revolution, thereby increasing crop yield, today has reached a near crisis situation in the agricultural sector. There could be some possible solutions to this. First, strengthening the research and development through the institutional modes such as the Punjab Agriculture University (PAU), and through adequate funding, encourage the agricultural scientists to come up with the ideas related to alternative patterns of cropping. Additionally, a Department of Psychology could be considered and set up within the PAU, which will be specialised in dealing with farmer and farm labourer issues so as to reduce their distress. Further, free electricity which is being provided to all the farmers since 1997, needs to be rationalized - one, for the reason that a large number of blocks for the groundwater in Punjab are already in the dark zone, and second, this may also lead to diversification from the production of just paddy to other crops.

Freight issue in the State

Currently, the exporters from Punjab prefer sending their consignments to the ports by road rather than by railways. This is because the cost under the road route is significantly lower than the rail. According to the exporters, from Ludhiana in Punjab to Mundra port in Gujarat, they end up saving somewhere in the range of INR 12000 to INR 20000 whilst using road over railways. The exporters in Punjab are of the opinion that while the road route lets them deliver a full container load of exports to vessel in 3-4 days, the rail route in its comparison can take somewhere around 13-14 days. The Inland Container Depot in addition, has been levying additional charges such as surveyor charges, data charges, documentation charges, and infrastructure development charges. This is again an important reason for many exporters shifting to road network from the rail route.

It is essential for the policy makers to intervene herein so as to rationalise the freight charges, especially those being levied by CONCOR, which is a Government firm, so that the exporters from Punjab become competitive vis-à-vis the exporters from the other states.

Revamping the Sports Goods Industry

Even with large numbers pertaining to the production and exports from Jalandhar, a reverse trend has been observed where it's losing to its competitors, both domestically and internationally. Though VAT has been subsumed after the GST came into being, it may be interesting to note that during the pre-GST period, a Value Added Tax (VAT) of over 6% was being, levied on the sports goods manufactured in Punjab, while the VAT in UP and Jammu & Kashmir was zero. As a result, Jalandhar, which earlier used to produce majority of sports goods, has seen manufacturing increasingly shifting to Meerut in Uttar Pradesh. GST, however, not applicable for exports, perhaps, has its implications on overall production, and has to be taken into consideration. Currently, the GST applicable is between 12-18% on various sports goods. The priority of the State Government should be to take up the issue of GST levied on this industry in particular. This will not only provide some relief to the dying sports industry of Jalandhar, but also make it globally competitive again.

Amritsar-Kolkata Corridor

The 1318 km Amritsar-Kolkata Corridor or Eastern Dedicated Freight Corridor (EDFC) as it is being called, would extend from Ludhiana in Punjab to Dankuni near Kolkata. The success of this could change the economy of Punjab in particular. The corridor is expected to pave ways for export of goods that are manufactured in Punjab to Bangladesh, Myanmar, Thailand and Malaysia. Other than this, a vital reason of developing this industrial corridor could be the extent of tapping Special Economic Zones (SEZs). Out of the 223 SEZs, as on 31 March 2018 in India, only 28 SEZs are in the seven States which fall on this Corridor, with no SEZs in Uttarakhand, Bihar and Jharkhand, and only 3 SEZs in Punjab (all in Mohali).

Identifying and Branding of Geographical Indication Products

In order to have products function as a Geographical Indication (GI), it must identify itself originating in a given place. Till date, out of the extensive list of 323 products that have been granted GI status across all the Indian States, only 2 products carry the name of Punjab, that too jointly with other States. It is interesting to note that the adjoining State of Himachal Pradesh has 7 GIs registered to its name. Punjab here can team up with the other States, just like it has done in the past, to apply for new registration to get the GI tags. Other than the joint application for the GI tags, the State can also focus on its products such as Punjabi 'jutti' and Patiala 'salwar', and consider them to file for GI tags. Care should also be taken at the State level to educate the artisans to reap the benefits.

Financial efforts towards managing Technical Barriers to Trade/Standards

Technical Barriers to Trade (TBT) are measures relating to technical regulations and standards, and procedures for assessment of conformity. These are increasingly emerging as a challenge for the exporters. For Punjab, it is even more important given that it is a key producer and exporter of agriculture and allied products, which remains one of the most protected sectors for majority of the trading nations. In order to encourage exporters, the State can share a portion of the expenses incurred for such compulsory certifications. Depending upon the turnover of the exporting unit, the State can bear 50-100% of the certification / compliance cost.

SUM UP

This Study on Punjab's exports has taken into account various aspects from identifying product based export potential to finding out countries from whom Punjab will be facing competition in the international arena. Further, a detailed analysis of the envisaged foreign capital investments over a period has been undertaken, thereby showcasing its implications especially on job creation. The untapped potential of the State, if channelled in the right direction, will be able to propel Punjab's exports, thereby achieving a target set by the Study of US$ 11.8 billion on the optimistic side, and contribute 2.24 % to India's exports by 2022-23, which actually was Punjab's share earlier in 2013-14.

1. INTRODUCTION

1.1. Overview

Punjab, one of the northern states of the country, and known as the 'Bread Basket of India', has traditionally been an agricultural economy. The State is endowed with rivers like Sutlej and Beas, giving it a natural advantage with respect to agriculture. Currently, over 80% of Punjab's land is under cultivation.

The State has been at the forefront of India's first Green Revolution in the 1960s, after having bounced back from the economic and social losses that it suffered post the partition. The food grain production from the State increased exponentially and Punjab took rapid strides in terms of economic growth. At present, almost 100% of the area sown is covered under irrigation, either through canals or tube wells, much higher than India's average irrigation coverage.

Strong economic growth was complemented by improving infrastructure – Punjab was one of the first few States in India to provide all weather roads and electricity to all its villages. As on 30th June 2017, the State had 2769.2 km of National Highways, which was 2.4% of the total national highway length of India. As far as the installed electricity capacity is concerned, as on 31th Jan 2019, 13.4 GW capacity was installed in Punjab which was 3.8% of India's total installed electricity capacity. The installed capacity through renewable energy sources was 9.5% while that through hydro was 28.4% of Punjab's total installed capacity.

As a result of the historically fast economic growth, the State was able to lift a large section of the population out of abject poverty – the population below poverty line[1] was 11.3% of the total, with 7.4% (of the total) living in the rural areas and 17.6% (of the total) living in the urban areas. According to the Census 2011, the State had a literacy rate of 75.8%, with a male literacy rate of 80.4% and female literacy rate of 70.7%.

1.2. Macroeconomic Profile

The Gross State Domestic Product (GSDP) is a key measure of growth and economic development, and serves as an important tool to gauge the structural changes in the economy of any State. It refers to the income generated by the production of goods and services within the geographical boundaries of any State.

The GSDP of Punjab, at constant 2011-12 prices, witnessed a consistent and gradual increase from ₹ 3 trillion in 2013-14 to ₹ 3.7 trillion in 2017-18, thereby recording an average annual growth rate (AAGR) of 5.6%. This growth has mostly been driven by the tertiary sector. The growth registered by the tertiary sector in each of the last five years has been greater than 6.5%. However, Punjab's share in the India's GDP has decreased from 3.1% in 2013-14 to 2.9% in 2017-18 (Table 1).

Table 1: GSDP of Punjab vis-à-vis India at constant (2011-12) prices in ₹ trillion

Year	GSDP at 2011-12 prices for Punjab	India's GDP at 2011-12 prices	Share of Punjab in India's GDP	Growth in GSDP of Punjab (%)	Growth in India's GDP (%)
2013-14	3.0	98.0	3.1%	6.6	6.4
2014-15	3.1	105.3	3.0%	4.2	7.4
2015-16	3.3	113.9	2.9%	5.8	8.2
2016-17	3.5	122.0	2.9%	6.6	7.1
2017-18	3.7	130.1	2.9%	5.7	6.6

Source: Economic & Statistical Organization, Government of Punjab; CMIE Economic Outlook; Exim Bank Research

[1]As per Expert Group constituted under chairmanship of Dr. C Rangarajan, poverty line is estimated as Monthly Per Capita Expenditure of ₹1407 in urban areas and ₹972 in rural areas.

Table 2: Per Capita NSDP of Punjab at constant (2011-12) prices vis-à-vis India in ₹

Year	Per capita NSDP for Punjab	Growth in Per capita NSDP for Punjab (%)	All-India per capita NNP	Growth in All-India per capita NNP (%)
2012-13	88915	3.9	65538	3.3
2013-14	93238	4.9	68572	4.6
2014-15	95807	2.8	72805	6.2
2015-16	100141	4.5	77826	6.9
2016-17	105386	5.2	82229	5.7

Source: Reserve Bank of India; Exim Bank Research

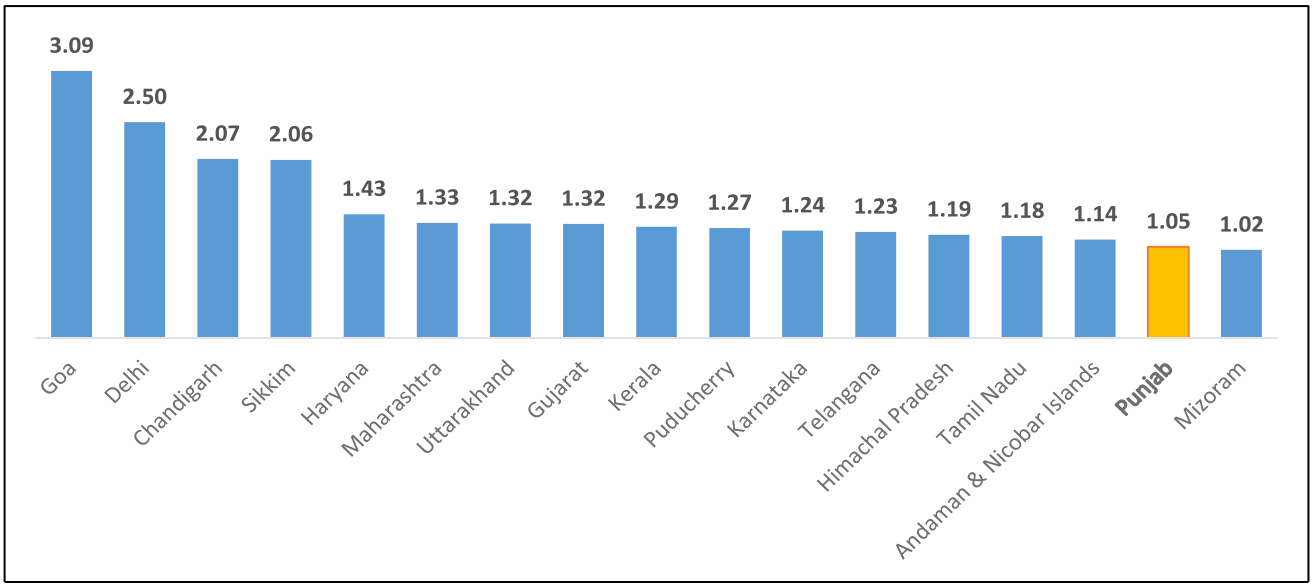
The per capita NSDP of Punjab at constant prices (2011-12) increased from ₹88,915 in 2012-13 to ₹ 105,386 in 2016-17. The per capita NSDP for Punjab has consistently remained higher for Punjab than India in the last 5 years (Table 2).

The State, in terms of per capita economic growth, has performed fairly well as compared to the country as a whole. In fact, in the context of the Per Capita Net State Domestic Product (NSDP) at factor cost at constant prices, the State of Punjab has been registering a decent rank in the last few years and stood at the 16th position with Per Capita NSDP of ₹ 1,05,386, in 2016-17. During 2012-13 to 2016-17, the per capita NSDP for Punjab registered an AAGR of 4.4% (Table 2).

The State of Punjab has seen a structural transformation since 2013-14 with the State gradually moving towards the services sector. The contribution of the services sector to the Gross State Value Added (GSVA) at basic at constant 2011-12 prices has increased from 46.1% in 2013-14 to almost 50% in 2017-18. This increase in the share has been majorly at the cost of agriculture.

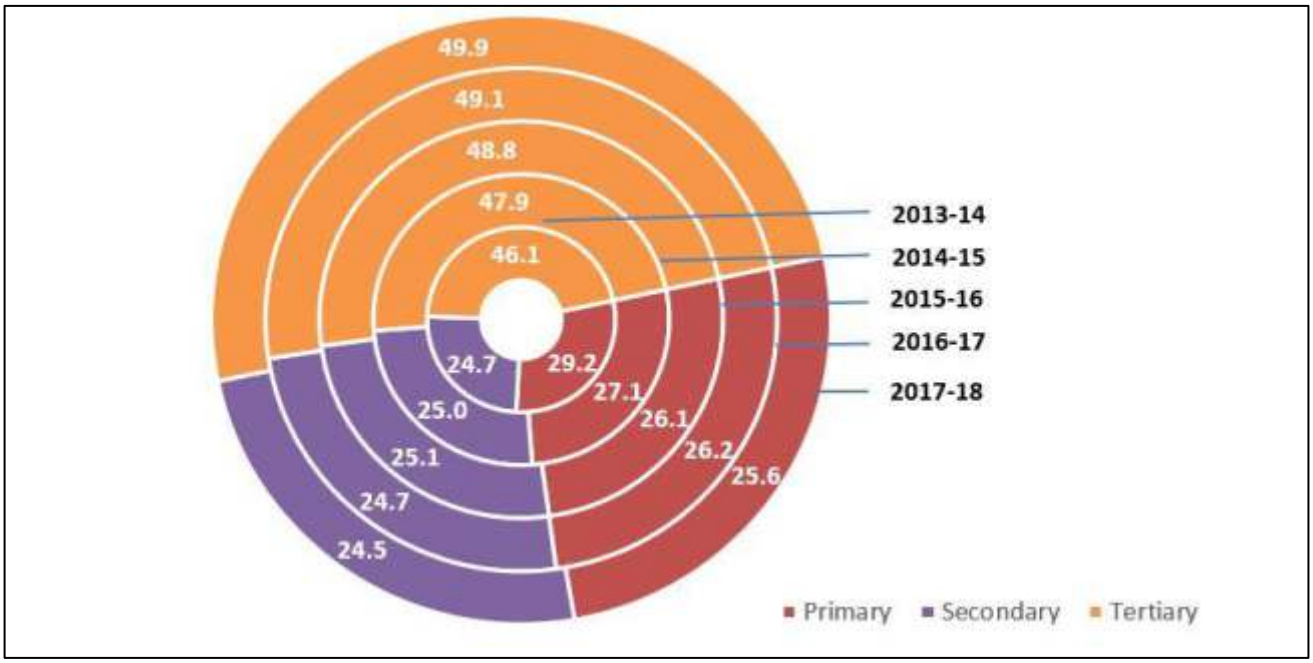
As far as the growth of the three key sectors are concerned, during 2013-14 to 2017-18, the tertiary sector registered the highest AAGR at 7.1%, higher than the overall GSVA growth at basic prices, which registered a growth of 5.2%. The other two sectors recorded AAGRs lower than the overall AAGR, with primary sector at 2.1% and secondary sector at 4.9%.

Figure 1: State-wise per capita NSDP at factor cost at constant prices (2011-12) in ₹ lakh: 2016-17



Source: Reserve Bank of India; Exim Bank Research

Figure 2: Share of Sectors in the Gross State Value Added of Punjab at Constant Prices (2011-12)



Source: Economic & Statistical Organization, Government of Punjab; Exim Bank Research

Broad Economic Activities

Primary Sector

The GSVA at constant 2011-12 prices in the primary sector for Punjab increased from ₹815.5 billion in 2013-14 to ₹873.1 billion in 2017-18, with crops, by far, accounting for the largest share – of 60.4% – in the primary sector GSVA in 2017-18 (Table 3).

Punjab remains a vital State with respect to the country's agriculture production. Although the contribution of Punjab to the country's agricultural GVA might seem to be low in absolute terms due to the State's relatively smaller geographical area (3% of the net sown area of the country), the State produces 19% of wheat, 10% of rice, 10% of milk, 20% of honey, 48% of mushroom and 5% of cotton in the country, and the wheat production of the State ranks at 7th position in the world, when compared with other leading producers.

Secondary Sector

The GSVA of the Secondary Sector increased from ₹689.5 billion in 2013-14 to ₹836.9 billion in 2017-18, registering an AAGR of 5.0% during this period, and contributed 24.5% to the total GSVA in 2017-18. More than half of the contribution from the secondary

Table 3: Key Economic Activities under the Primary Sector (₹ Billion)

Item	2013-14	2014-15	2015-16	2016-17	2017-18	AAGR (2013-14 to 2017-18) in %	Share in total GSVA (2017-18)
Crops	517.4	482.4	479.5	512.2	527.0	0.6	15.4%
Livestock	222.1	228.6	240.4	254.8	263.7	4.4	7.7%
Forestry & Logging	69.0	68.7	70.5	72.1	73.6	1.6	2.2%
Fishing	6.2	6.9	7.2	8.0	8.3	7.6	0.2%
Mining and quarrying	0.8	0.8	0.3	0.4	0.5	-2.3	0.0%
Primary Total	**815.5**	**787.4**	**798.0**	**847.6**	**873.1**	**1.8**	**25.6%**
GSVA Total at basic prices	**2792.5**	**2900.9**	**3053.9**	**3240.9**	**3413.4**	**5.2**	**100%**

Source: Economic & Statistical Organization, Government of Punjab; Exim Bank Research

Table 4: Key Economic Activities under the Secondary Sector (₹ Billion)

Item	2013-14	2014-15	2015-16	2016-17	2017-18	AAGR (2013-14 to 2017-18) in %	Share in total GSVA (2017-18)
Manufacturing	409.6	429.9	454.8	480.1	506.4	5.4	14.8%
Electricity, Gas, Water Supply & other Utility services	80.1	92.2	105.3	113.2	120.7	10.8	3.5%
Construction	199.8	202.5	206.2	207.4	209.9	1.2	6.1%
Secondary Total	**689.5**	**724.6**	**766.3**	**800.7**	**836.9**	**5.0**	**24.5%**
GSVA Total at basic prices	**2792.5**	**2900.9**	**3053.9**	**3240.9**	**3413.4**	**5.2**	**100%**

Source: Economic & Statistical Organization, Government of Punjab; Exim Bank Research

sector was accounted for by the manufacturing segment (59.3%), which registered an AAGR of 5.4% during 2013-14 to 2017-18 (Table 4).

There are an estimated 1.72 lac registered Micro, Small, Medium and Large Industrial Units in the State as on 31st March 2017 with the fixed investment of about ₹86324 crore and employing about 15.26 lakh persons. These units make significant contribution to the manufacturing sector of Punjab and produces items such as hosiery goods, bicycles and cycle parts, automobile parts, sewing machine parts, yarn and textile, hand tools and machine tools, sports goods and leather goods.

Tertiary Sector

The tertiary sector in Punjab has been the main driver of the State's GSVA growth, registering an average growth rate of 7.2% vis-à-vis the overall GSVA growth rate of 5.2% during 2013-14 to 2017-18. The tertiary sector's contribution to the total GSVA was almost 50% in 2017-18. 'Trade & Repair Services' and 'Real estate' sectors were two of the main drivers for the tertiary sector with shares of 22.0% and 20.3%, respectively, in tertiary GSVA in 2017-18. Additionally, both these segments also recorded appreciable growth, registering AAGRs of 7.2% and 6.8%, respectively, during 2013-14 to 2017-18 (Table 5).

Table 5: Key Economic Activities under the Tertiary Sector (₹ Billion)

Item	2013-14	2014-15	2015-16	2016-17	2017-18	AAGR (2013-14 to 2017-18) in %	Share in total GSVA (2017-18)
Trade & Repair Services	282.9	305.6	327.0	349.3	373.7	7.2	10.9%
Hotels & Restaurants	17.6	18.1	19.3	20.6	22.1	5.9	0.6%
Railways	20.0	21.1	22.5	23.0	23.7	4.4	0.7%
Road transport	72.9	77.6	82.2	88.4	94.7	6.8	2.8%
Air transport	0.4	1.0	1.5	1.9	2.3	69.6	0.1%
Services incidental to transport	3.8	4.1	4.4	4.7	5.1	7.5	0.1%
Storage	2.2	2.3	2.3	2.4	2.5	2.9	0.1%
Communication & Services related to broadcasting	52.6	57.8	62.7	67.7	74.3	9.0	2.2%
Financial Services	160.3	165.2	173.1	180.0	186.4	3.8	5.5%
Real estate, ownership of dwellings & professional services	261.9	281.8	301.5	320.9	340.9	6.8	10.0%
Public Administration	145.9	157.5	165.8	176.4	187.9	6.5	5.5%
Other Services	267.1	296.9	327.3	357.3	390.0	9.9	11.4%
Tertiary Total	**1287.5**	**1388.9**	**1489.7**	**1592.6**	**1703.4**	**7.2**	**49.9%**
GSVA Total at basic prices	**2792.5**	**2900.9**	**3053.9**	**3240.9**	**3413.4**	**5.2**	**100%**

Source: Economic & Statistical Organization, Government of Punjab; Exim Bank Research

1.3. Existing Policy Framework

The Government of Punjab has put in place an Industrial and Business Development Policy-2017. The policy has been planned for 5 years from the date of notification. The Policy has nine goals in place, in line with the vision to develop the State as one of the most economically developed States in the country and make the State amongst the best for doing business. These goals are: (i) to accelerate industrial growth and job creation (ii) to develop world class infrastructure and bring anchor units (iii) to provide quality and affordable power to the industry (iv) to accelerate growth of MSMEs (v) to focus on start-ups and entrepreneurship (vi) to facilitate availability of skilled manpower for the industry (vii) to improve the ease of doing business in the State (viii) to build institutional capacity and enhance institutional linkages and (ix) to bring synergy between state programs and central scheme.

Further, the Policy highlights eight strategic pillars which include infrastructure; power; MSMEs; start-up and entrepreneurship; skill development; ease of

Table 6: Fiscal Incentives for thrust sectors in Punjab

Thrust Sectors	Nature of Incentive	Extent of incentive for units in thrust sectors
Manufacturing Industry (i) E-vehicle, NRSE equipment, energy storage devices, medical equipment, industry 4.0 based manufacturing enterprises (ii) Textile including apparel and made -ups, technical textiles (iii) Agri & food processing industries (iv) Footwear and accessories (v) Electronics (vi) Aerospace and Defence (vii) Biotechnology, Pharmaceuticals (viii) Processing of agro waste (biomass) into energy, bio-energy, manure or any other usable form (ix) Bicycle and bicycle components/ parts (x) Alloy steel **Service Industry** (I) IT and ITes (ii) Life sciences (iii) Skill development centres, incubation centres, Accelerators (iv) Healthcare (v) Tourism & hospitality (vi) Media and entertainment (vii) Logistics (viii) Maintenance, repair and overhaul (MRO) for aviation & defence sector	Investment subsidy by way of reimbursement of net SGST on intra-state sales	100% of net SGST for 10 years with a cap of 125% of Fixed Capital Investment (FCI).
	Exemption from Electricity Duty	100% exemption for 10 years
	Exemption/ reimbursement from Stamp Duty	100% exemption/ reimbursement from Stamp Duty on purchase or lease of land and building
	Exemption from Change of land use (CLU)/ External Development Charges (EDC)	100% exemption from CLU/EDC
	Exemption from Property Tax	100% exemption for 10 years

doing business; fiscal and non-fiscal incentives; and stakeholder management. With respect to start-ups and entrepreneurship, the Policy plans to facilitate 1000 start-ups in 5 years; set up 10 incubation centres; build strong linkages with all major institutions; and facilitate 50 Entrepreneurship Development Centres in the colleges.

As far as the fiscal incentives for Start-up Units are concerned, the Industrial and Business Development Policy mentions of various incentives such as capital subsidy, recurring expense reimbursement, mentoring and training etc. for the incubators. For the Start-up units, the policy has provisions for interest subsidy; lease rental subsidy; seed funding; and scale up funding. The Industrial and Business Development Policy also goes a step further and lays down sector specific strategies for the thrust sectors namely textiles; apparels; bicycle and parts; automobiles and components; leather and sports goods; amongst others. There are also fiscal incentives for the thrust sectors, some of which have been identified in the Policy (Table 6).

1.4. Scope of the Study

Punjab has a well-established infrastructure for all three hands of the economy, complemented by investor-friendly policies. While the tertiary sector has been the major growth driver for the State economy, the agriculture sector remains its backbone. This robust growth bodes well for exports from the State.

The exports from Punjab in 2017-18 stood at US$ 5788.2 million, down from US$ 7055.3 million in 2013-14, registering an AAGR of (-) 4.4%. This is much lower than AAGR of (-) 0.9% recorded in India's overall exports during the same period. However, given the increasing focus of India as well as the State to build an export oriented economy, there are plethora of opportunities that Punjab has, which if capitalised, would allow the State to bounce back, and not just regain its lost share in exports but also build a new momentum, with exports emerging as the engine of the State's economy. This would, inter alia, entail creating an enabling ecosystem for exports, identification of key product segments and attracting investments into the State. Punjab has historically been a favourable destination for attracting foreign investments.

According to the fDi Intelligence of the Financial Times, in the last decade (during April 2009 and March 2018), 63 FDI projects were envisaged by 54 companies in Punjab. These envisaged projects represented a total capital investment of US$ 4.2 billion, which implies an average investment of US$ 65.8 million per project[2]. This needs further momentum and should be aligned to the 'Make in India' initiative of the Central Government.

Set against this backdrop, this Study makes an attempt to assess the performance of Punjab in terms of production, exports and investments, and identifies commodities which have a high export potential and can propel the State economy on a higher growth path. In doing so, the Study has underlined the importance of setting a medium term export target for Punjab which could help the State to analyse its performance and take timely corrective actions in case of under-performance. The Study also highlights select strategies which would help realise the State's export potential.

[2]fDi 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.

2. EXPORT POTENTIAL

Given its size and geography, Punjab has been performing decently on the export front. As per the latest data available, the State ranked 13th on the exports ranking table, with a share of 1.95% in the country's exports, with exports amounting to US$ 5.8 billion in 2017-18. Punjab today, is one of the largest producers of wheat and rice in India, and its economy is further complemented by a strong industrial base, especially in textiles.

It may be noticed that although Punjab, as per its natural geographical constraints performs well on the export side, lately, its share has fallen in the country's exports. Whilst the State's share was 2.2% (or 2.24%) in 2013-14, it gradually fell down to 2% (or 1.95%) in 2017-18. As a result, Punjab's rank, which was 10th in 2013-14 in exports, fell to 13th in 2017-18. On the contrary, shares of other landlocked states such as Haryana (3.4% in 2013-14 to 4.5% in 2017-18); Uttar Pradesh (4.2% in 2013-14 to 4.7% in 2017-18); and Rajasthan (1.9% to 2.3%), observed significant jumps (Table 7).

With the Government of India providing a special thrust on pushing exports from the country, it becomes critical for the State of Punjab to contribute effectively to propel India towards achieving the national export target of US$ 1 trillion by 2024-25. In order to do so, it is felt that the State Government should layout a medium-term export target as one of the performance parameters, with a well-drawn strategy, and keep monitoring the progress on a periodical basis. The following section aims to put together what this export target could be, taking cognizance of the current export trends from the State, and the export target of the country as a whole.

2.1. Setting an Export Target

The Indian Economy is at an important juncture in its course of growth. Whilst, it has borne certain external and internal shocks in the last decade, it has emerged as one of the fastest growing economies of the world. This has been coupled by the strong domestic macroeconomic parameters and the recovery of the

Table 7 : State wise Share in India's exports

Rank	States	2013-14	2014-15	2015-16	2016-17	2017-18
1.	Maharashtra	22.8%	23.6%	25.9%	25.0%	23.5%
2.	Gujarat	23.3%	19.9%	19.4%	20.1%	22.5%
3.	Tamil Nadu	8.5%	8.9%	9.9%	9.8%	10.0%
4.	Karnataka	5.6%	7.7%	7.5%	7.3%	6.1%
5.	Uttar Pradesh	4.2%	4.5%	4.8%	4.6%	4.7%
6.	Haryana	3.4%	3.7%	4.0%	4.0%	4.5%
7.	Andhra Pradesh	4.9%	5.2%	4.7%	4.4%	4.4%
8.	West Bengal	3.3%	2.9%	2.9%	3.1%	3.1%
9.	Delhi	2.9%	3.3%	3.6%	3.9%	2.9%
10.	Odisha	1.3%	1.1%	1.1%	2.2%	2.6%
11.	Kerala	1.4%	1.3%	1.7%	1.8%	2.5%
12.	Rajasthan	1.9%	2.0%	2.0%	2.1%	2.3%
13.	Punjab	2.2%	2.2%	2.2%	2.0%	2.0%
14.	Madhya Pradesh	1.4%	1.3%	1.5%	1.6%	1.8%
15.	Goa	0.5%	0.5%	0.6%	0.8%	0.7%

Source: DGCIS; EXIM Bank Research

Table 8 :Export Target for Punjab

	2017-18	2022-23
Business as Usual Scenario(US$ Million)	5788	9194
Optimistic Scenario (US$ Million)	5788	10319

Source: EXIM Bank Research

global economy and thus, Indian economy, at present, has the capacity to put itself in a promising position at the global platform. Given that, Punjab, after experiencing a dip in its exports, is looking towards a recovery path, the State has an opportunity to play a significant role in meeting India's overall export targets.

Business as Usual Scenario

The exports from Punjab stood at US$ 5788 million in 2017-18, which was a drop from US$ 7055 million in 2013-14. During this period, Punjab's exports registered a negative AAGR of (-) 4.4%. However, Punjab displayed an impressive recovery in 2017-18, over the year 2016-17, by registering a growth of 9.7%. Under a baseline scenario, which assumes that Punjab would continue to grow at the same rate of 9.7%, year- on -year, for the next 5 years, the State may end up achieving US$ 9194 million of merchandise exports by 2022-23 (Table 8).

Optimistic Scenario

India is on the threshold of a high growth trajectory with a vision to achieve US$ 5 trillion GDP by 2024-25. One of the key enablers for this would be the country's exports sector, with the Government targeting exports of goods and services to be at least 20% of the GDP, that is, US$ 1 trillion by 2024-25. Going by the current trend, almost two-thirds of the exports are expected to be generated by merchandise goods and the remaining one-third by services. This sets a merchandise export target of approximately US$ 666 billion for India by 2024-25. To achieve this target, India will have to register a CAGR of 12.3%, from the base level of 2017-18 figure.

However, taking cognizance of potential export opportunity, Punjab is bound to place itself on the growth trajectory to benefit from this. An enabling policy environment, coupled with product and market diversification; creation of an ecosystem which facilitates exports in general, and by designing framework which promotes entrepreneurship in new high-technology and dynamic sectors, in particular, would drive the State to further up the ante towards export led growth. If Punjab's exports grows in tandem with India's desired export growth of 12.3% (to achieve the envisaged export target), Punjab's exports in 5 years would touch US$ 10.3 billion by 2022-23.

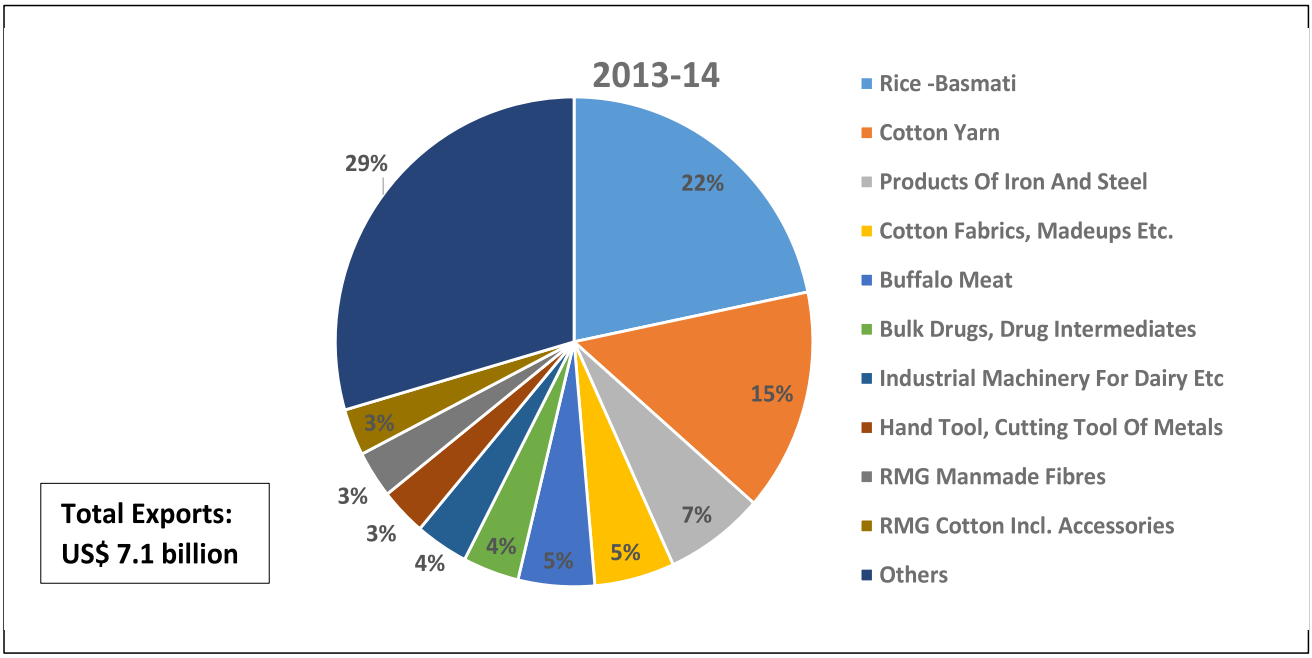
Export Target

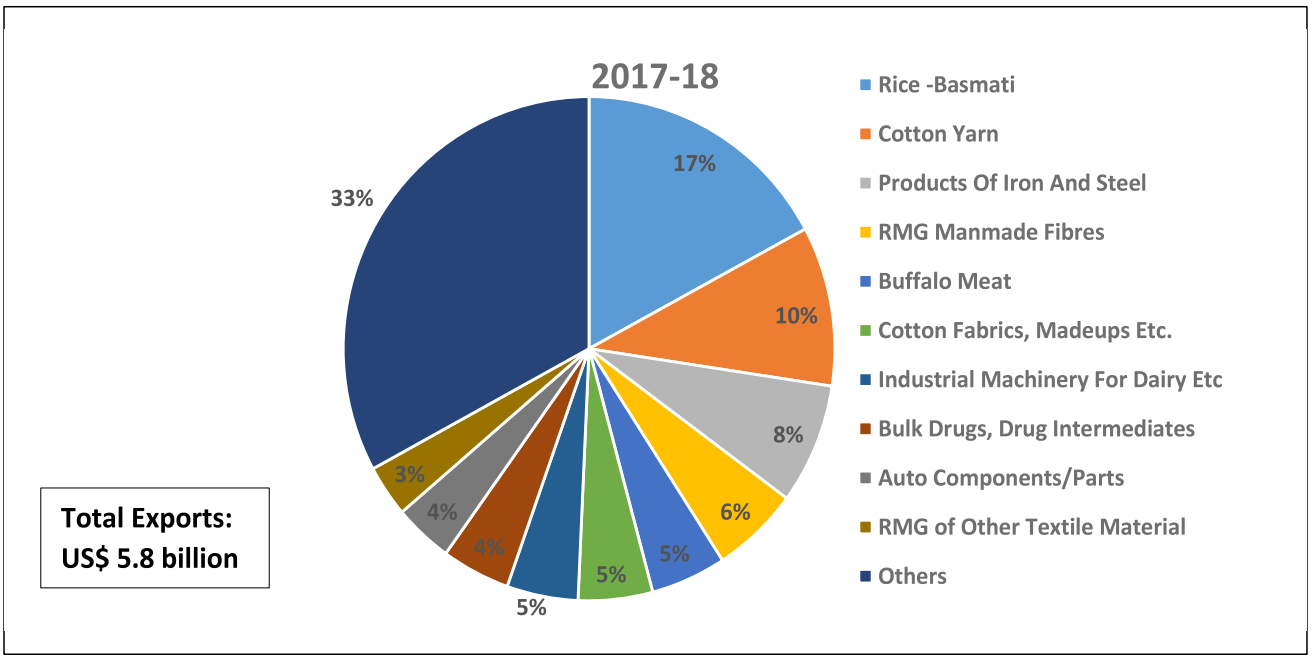
The above mentioned scenarios are either 'Business as Usual' or 'Optimistic' scenario. However, in a practical course of action, India is expected to progress well in its export target of US$ 1 trillion by 2024-25, complemented by the recovery of global economy. At the same time, Punjab has been working hard on bettering the business environment of the State and other policy measures, as is also observed in its 'Industrial and Business Development Policy, 2017'. As a result, Punjab should easily be able to achieve an export target between a range of US$ 9.2 to US$ 10.3 billion which has been set by the 'Business as Usual' and 'Optimistic' scenario, respectively. It may also be noted that if Punjab also focuses on increasing its share in Indian exports, and is able to at least reach the level achieved in 2013-14 (share of 2.24% - highest in the recent times), the State can achieve exports worth US$ 11.8 billion in 2022-23.

Current Scenario

The exports from Punjab reached a figure of US$ 5.8 billion in 2017-18, down from exports valued at US$ 7.1 billion in 2013-14, registering a negative AAGR of 4.4%, during this period. The top 10 principal commodities from Punjab accounted for 67.1% of the exports in 2017-18, down from 70.5% contribution by the top 10 principal commodities in 2013-14, signifying a decrease in the exported products' concentration.

Figure 3: Principal Commodities exported from Punjab in 2013-14 and 2017-18





Source: DGCIS; EXIM Bank Research

The top exported principal commodity was 'Rice-Basmati' with a contribution of over 17% in the total exports in 2017-18. This was followed by 'Cotton Yarn' (10.3%); 'Products of Iron and Steel' (7.7%); 'RMG Manmade Fibres' (5.7%); and 'Buffalo Meat' (5%). It may be noted that the 'Auto Components/Parts' with a contribution of 3.9% in 2017-18 and 'RMG of Other Textile Material' with a share of 3.3% in the same year, were not in the list of top 10 exported principal commodities in 2013-14, and have been new entrants. These two commodities replaced 'Hand Tool, Cutting Tool of Metals' (share of 3.1% in 2013-14) and 'RMG Cotton including accessories' (share of 3.1% in 2013-14) (Figure 3).

Table 9: Top 10 Items at HS-6 digit level exported from Punjab in 2017-18 (US$ million)

HS Code	Description	2013-14	2014-15	2015-16	2016-17	2017-18	Share of the item in Punjab's total exports in % (2017-18)	Share in India's exports of the commodity in % (2017-18)	Share of the Item in India's total exports in % (2017-18)	AAGR (2013-14 to 2017-18) in %
100630	Semi-milled or wholly milled rice, whether or not polished or glazed	1715.8	1393.8	947.4	989.6	1064.3	18.4%	14.6%	2.4%	-9.7%
020230	Frozen, boneless meat of bovine animals	364.6	306.1	169.9	97.9	271.9	4.7%	7.2%	1.2%	18.7%
630260	Toilet linen and kitchen linen, of terry towelling or similar terry fabrics of cotton	267.6	296.8	237.0	220.5	206.5	3.6%	20.5%	0.3%	-5.6%
520523	Single cotton yarn, of combed fibres, containing >= 85% cotton by weight and with a linear density of 192,31 decitex to < 232,56 decitex "> MN 43 to MN 52"	386.8	295.7	208.3	205.3	203.1	3.5%	25.3%	0.3%	-13.9%
870899	Parts and accessories, for tractors, motor vehicles	127.7	149.2	150.6	152.3	178.6	3.1%	6.8%	0.9%	9.0%
730840	Equipment for scaffolding, shuttering, propping or pit-propping (excluding composite sheet piling products and formwork panels for poured-in-place concrete, which have the characteristics of moulds)	78.9	104.9	154.1	118.7	141.1	2.4%	70.3%	0.1%	18.9%
520524	Single cotton yarn, of combed fibres, containing >= 85% cotton by weight and with a linear density of 125 decitex to < 192,31 decitex "> MN 52 to MN 80"	209.5	223.1	203.2	159.4	140.9	2.4%	18.7%	0.2%	-8.9%
610520	Men's or boys' shirts of man-made fibres, knitted or crocheted	114.1	141.8	151.0	150.0	140.2	2.4%	59.2%	0.1%	5.9%
820411	Hand-operated spanners and wrenches, incl. torque meter wrenches, of base metal, non-adjustable	117.8	114.2	101.8	96.5	111.4	1.9%	87.1%	0.0%	-0.9%
610990	T-shirts, singlets and other vests of textile materials, knitted or crocheted (excluding cotton)	126.0	183.8	136.5	101.5	109.1	1.9%	12.5%	0.3%	0.5%
Top 10 (2017-18) Total		**3508.8**	**3209.5**	**2459.8**	**2291.7**	**2567.2**	**44.4%**	**-**	**-**	**-6.7%**
Grand Total		**7055.3**	**6775.8**	**5611.9**	**5276.6**	**5788.2**	**100%**	**-**	**-**	**-4.4%**

Source: DGCIS; EXIM Bank Research

Whilst the top 10 principal items contributed 67.1% to the total exports of Punjab in 2017-18, the top 10 exported products at 6 digit level constituted 44.4% of the State's total exports in 2017-18, reflecting the narrow base of its exports.

In 2017-18, at HS 6 digit level, the largest exported item was 'Semi-milled or wholly milled rice, whether or not polished or glazed' (HS Code-100630) with exports being registered at US$ 1064.3 million, down from US$ 1715.8 million, with AAGR being recorded

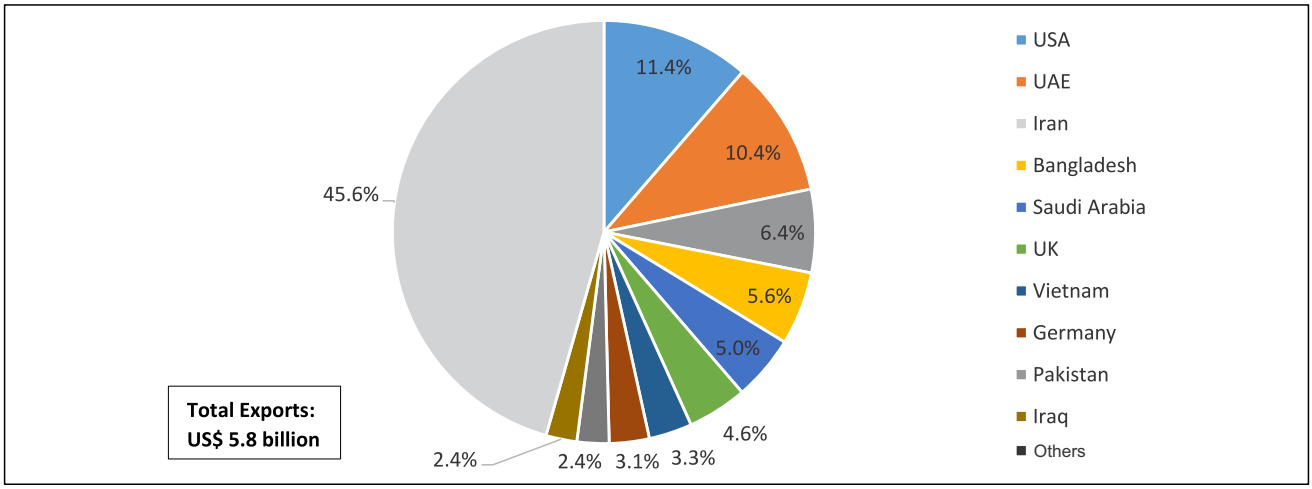
at (-) 9.7%, during this period. The product contributed 18.4% to Punjab's exports in 2017-18, down from 24.3% in 2013-14. Almost 15% of this item exported by India was from Punjab, in 2017-18. One of the major reasons for the falling exports of HS code 100630 was the falling exports to Iran during the same period. The exports to Iran which were registered at US$ 826.1 million in 2013-14 with a share of 48.1%, fell to US$ 336.6 million in 2014-15 (share of 24.2%) and further to US$ 182 million in 2015-16 (share of 19.2%). It may be noted that the share of India in Iran's imports of HS 100630 dropped from 81.5% in 2014 to 65.5% in 2015. Its imports of rice diversified during this period in terms of geographies and the share of countries such as Pakistan, the USA and Uruguay showed a rise. In 2013, Iran had imported a lot of rice and had huge stocks. So, they raised their import duties when they were adequately able to harvest on their own, in order to protect their farmers.

The second highest exported item in 2017-18 was 'Frozen, boneless meat of bovine animals' (HS code-020230). This item recorded exports worth US$ 271.9 million in 2017-18, down from US$ 364.5 million in 2013-14 and up from a 5-year low of US$ 97.1 million in 2016-17. As a result, the exports of this item registered an AAGR of 18.7%, during 2013-14 to 2017-18, with the growth in the year 2017-18, majorly supporting this. The major contributor to the growth in 2017-18 were the exports to Vietnam. Vietnam, which had a share of 21.4% with exports at US$ 77.8 million in 2013-14, saw its share surging to 52.7% in 2017-18, with exports worth US$ 143.3 million. The exports of this commodity to Vietnam during 2013-14 to 2017-18 registered an AAGR of 120.7%.

Within the top 10 exported items from Punjab in 2017-18, other than the above mentioned HS Code-020230, four other items at 6 digit level, registered a positive AAGR during 2013-14 to 2017-18. These are, 'Parts and accessories, for tractors, motor vehicles' (HS code 870899, Rank-5th); 'Equipment for scaffolding, shuttering, propping or pit-propping (HS code-730840, Rank-6th); 'Men's or boys' shirts of man-made fibres, knitted or crocheted' (HS code-610520, Rank-8th); and 'T-shirts, singlets and other vests of textile materials, knitted or crocheted (excluding cotton)' (HS Code-610990; Rank 10th). Additionally, barring 2 items out of the top 10 exported items, namely, 'Frozen, boneless meat of bovine animals' (HS code-020230, share of 7.2%) and 'Parts and accessories, for tractors, motor vehicles' (HS code-870899, share of 6.8%) all other items have a share of greater than 10% in India's exports of that commodity (Table 9).

A destination wise analysis of exports from Punjab reveals that whilst the top 10 exporting destinations in 2013-14 contributed 58.5% to Punjab's exports, the contribution by the top 10 destinations was 54.5% in 2017-18, signifying diversification of export destinations. The major export destinations for Punjab in 2017-18 were USA (11.4%); UAE (10.4%); Iran (6.4%); Bangladesh (5.6%); and Saudi Arabia (5%) (Figure 4).

Figure 4 : Major Export Destinations for Punjab (2017-18)



Additionally, it may be observed that three out of the top 10 export destinations in 2017-18, namely, Vietnam (share of 3.3%, 7th rank); Pakistan (share of 2.5%, 9th rank); and Iraq (share of 2.4%, 10th rank), were not a part of major export destinations in 2013-14. On the other hand, China; Egypt and Malaysia, which were a part of top 10 exporting destinations in 2013-14, lost their place in 2017-18. In fact, China which had a share of 6.3% in 2013-14 and registered 4th rank, slipped down to rank 11th with a share of just 2.4% in 2017-18. Exports to China during this period fell from US$ 441.7 million to US$ 136 million, registering an AAGR of (-) 25.3%.

2.2. Granular Analysis of Products

The world exports during the period, 2013-2017, have fallen at an average rate of (-) 1.4%, annually. However, the world exports recovered in 2017 and registered a growth rate of 10.5%.

As per the calendar year, the exports from Punjab have not performed up to the mark in the last 5 years with the average annual growth rate of (-) 4.5% during 2013 to 2017 (calendar year). Mirroring world export trends, the exports from Punjab showed some good signs of recovery by registering a growth rate of over 10% in 2017 over 2016.

The exports from India also fell at an average rate of (-) 2.6%, annually, during 2013 to 2017. Seen in this context, the exports from Punjab have a lot to improve, vis-à-vis both the Indian and the world export performance during 2013 to 2017. However, in order to provide a strong impetus and make exports as the engine of growth, there is a need to identify dynamic products and markets, and create an enabling ecosystem of supporting exports from Punjab. This would also include an attempt at changing the mind-set of entrepreneurs, who are either content at serving the domestic market or consider exports as too risky an option to venture into.

This Chapter aims to identify products and markets that could help the State realise its export potential, by assessing both the supply and demand side dynamics. The analysis in the next section focuses on all the HS-6 digit products exported by Punjab which have demonstrated comparative advantage. Quantification of comparative advantage will help in identifying not only products where exports from the State have been performing well but also in those products where success has been limited. For this purpose, the Study aims to classify the exports into four categories, namely, Product Champions; Underachievers; Losers in Sectors with declining imports; and Growers in sectors with declining imports. With the categorization of the products into these four segments, the Study aims to ultimately classify these into industries and focus on only the relevant products from the relative industries.

Competitiveness Indicators

Revealed Comparative 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 the trade profile reflects the inter-country differences in terms of relative costs as well as non-price aspects. As per Balassa's (1965) measure, index for country i, commodity j is-

$$RCAij = \frac{(Xji/Xi)}{(Xjw/Xw)}$$

Where,

Xji: exports of commodity j from country i

Xi: total exports from country i

Xjw: total exports of commodity j from world

Xw: 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 demonstrates capability of revealing the extent of comparative advantage that a country has in a commodity more precisely and consistently than other alternative RCA indices in the literature. NRCA can be defined in the following manner

$$NRCAij = \frac{RCAij - 1}{RCAij + 1}$$

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.

The export competitiveness of Punjab has been mapped with respect to the global demand. This has been undertaken with a view to outline a market specific approach for exporters. An overarching analysis has been attempted in order to identify products from the industries 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 Punjab and need to be suitably targeted. The section also attempts to identify the products where Punjab 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 the State's performance in overseas markets, namely, the NRCA for products at the State level, and Average Annual Growth Rate (AAGR) for global imports. On the basis of these two considerations, a four quadrant matrix is prepared for product identification. The four quadrants imply the following:

- ***Product Champions (Product 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 2013-2017, while Punjab's exports of these products to the world are also competitive, reflected in positive NRCA values for such products.

- ***Underachievers (Product AAGR > World Import AAGR; Negative NRCA):*** Punjab does not have competitiveness in these products although their import demand has grown significantly over the period under consideration, globally. The State can strive towards increasing competitiveness in these markets for the identified products.

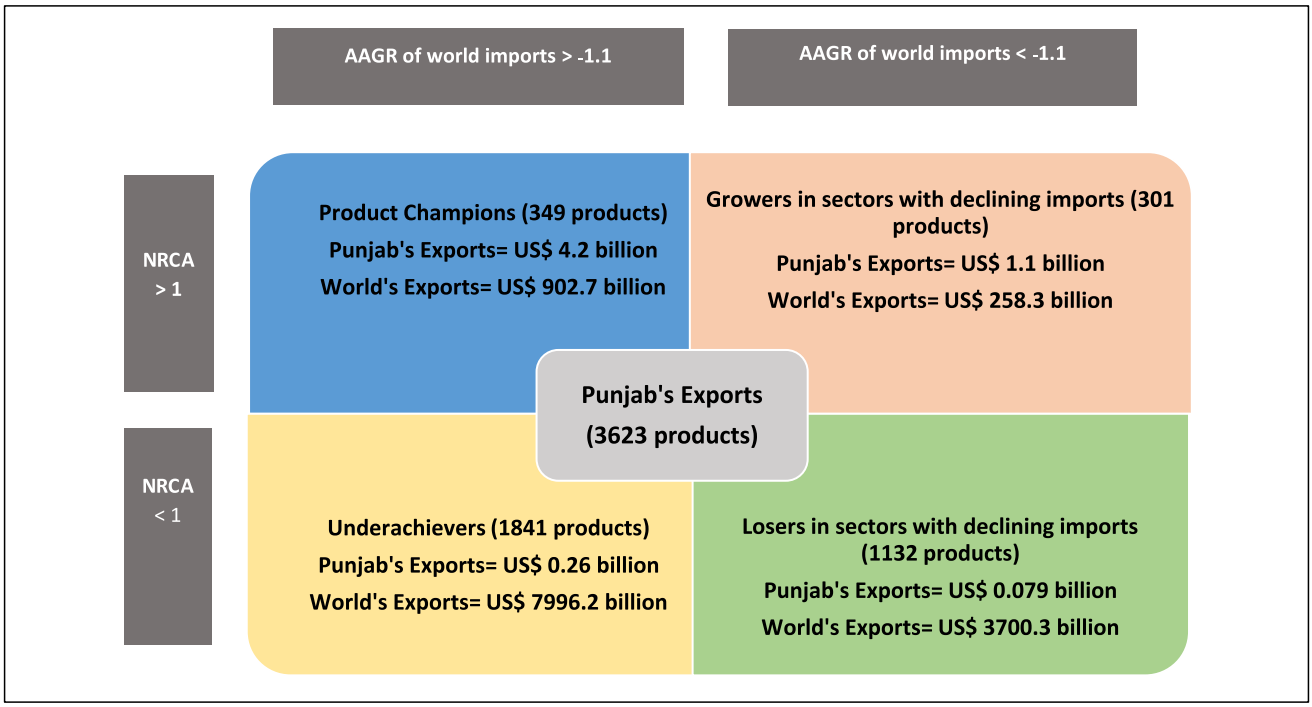
- ***Growers in sectors with declining imports (Product AAGR < World Import AAGR; Positive NRCA):*** Punjab has competitiveness in these products, even though the world import AAGR for these products has not been robust.

- ***Losers in Sectors with declining imports (Product AAGR < World Import AAGR; Negative NRCA):*** Punjab does not have competitiveness in these products, and these sectors have also registered weak global import growth during the period under consideration.

Product Identification based on competitiveness

In order to identify the products based on their competitiveness, the four quadrant analysis has been undertaken based on the HS Code classifications at 6 digit level, whilst calculating their NRCA and mapping them against the AAGR of global imports of all products. The quadrants are drawn by comparing the overall AAGR of global imports for all products during 2013-17 (which was -1.1%), to the NRCA of the products during the same period. This exercise aims to identify products whose imports over the period 2013-2017 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 (Figure 5).

Figure 5: Product Classification based on Export Competitiveness



Source: UN Comtrade; EXIM Bank Research

- According to the above mentioned methodology, out of the 3623 items at the HS 6 digit level, 349 items fell into the category of the product champions (PCs). The combined exports of these items from Punjab were US$ 4.2 billion in 2017, representing approximately 74% of Punjab's exports in 2017.
- The highest number of products were in the category of underachievers at 1841 with exports worth US$ 0.26 billion from Punjab.
- This was followed by 'Growers in sectors with declining imports' (GDIs) which were 301 in number, with Punjab's exports amounting to US$ 1.1 billion.

The underachievers have shown a robust growth rate in the last 5 years in the world exports and in fact, have been of the highest export value among the 4 categories. A detailed list of select underachievers is in the Annexure 2. Also, a significant shift needs to be made from the GDIs to the Product Champions, in order to make an efficient utilization of resources and enhance the exports from the State at the same time.

Further, the Study suggests to strengthen the existing products in the category of Product Champions in order to exploit the full potential for the products which are already showing a robust growth in the world market, whilst Punjab's exports also hold a comparative advantage in them.

Various parameters like world demand, top importers, value, share and rank of India in the global trade, along with major export destinations for Punjab have been used to analyse the 'Product Champions' category, as it is the most promising quadrant in terms of existing export potential.

In order to identify Product Champion sectors, the Study adopts the methodology of aggregating the 349 Product Champions identified at 6 digit HS code level to 59 products at 2 digit HS code (Table 10). Subsequently out of these 59 consolidated product list, the top 10 products at 2 digit HS code are considered for further analysis. These 10 products are analysed in detail and for each 2 digit product group, the Study takes the top five 6-digit items to undertake deeper analysis, which totals to 48 PCs at 6 digit level[3].

Table 10: Broad industry classification based on identified PCs

Broad Industry	HS Codes	Punjab's exports in 2017 (US$ Million)	Share in India's exports in 2017
Agriculture and allied	1 to 24	1457.2	10.3%
Textiles	50-60; 63	764.5	11.6%
Apparels	61-62	599.8	6.7%
Iron & Steel and their articles	72-73	356.9	15.2%
Railway locomotives and other vehicles	86-89	345.7	9.9%
Other Base metals and their articles	74-83	221.7	15.8%
Plastics; rubber and their articles	39-40	100.0	12.5%
Machinery; Electrical equipment etc.	84-85	96.2	4.9%
Chemicals and allied	28-29; 31 to 38	73.8	3.3%
Toys; games; sports requisites and other articles	94-96	70.6	30.7%
Leather articles etc.	41-43	32.5	2.4%
Pharmaceuticals	30	13.7	5.2%
Wood; pulp of wood and other articles	44-49	13.6	19.0%
Optical; photographic; medical instruments and clocks	90-92	6.2	9.3%
Footwear; Headgear etc.	64-67	4.8	12.6%
Mineral products	25	1.4	0.7%
Arms & Ammunition	93	0.1	1.0%
Articles of stone, plaster etc.	68-70	0.0	1.7%
Total		**4158.6**	**9.4%**

Source: UN Comtrade; EXIM Bank Research

The list of these 48 product champions is presented in Annexure 1.

Further, a comparison of the major (top 5) exporting destinations of Punjab for the identified 48 PCs and the major importers (top 5) in the world for the same PCs (48 in count), shows that there are 75 instances where one of the top 5 exporting destinations for the State is also one of the top 5 importers in the world for that item. These 75 instances are spread over 40 items, which means that these products would require focussed attention for enhancing exports. Further, there are 11 items out of the 48 PCs, for which the topmost exporting destination for the State is also the top-most importer in the world (Annexure 1).

An analysis of the items exported by Punjab (at HS 6-digit level of classification) in 2017 shows that only 7 of the top 100 items exported by Punjab have been present in the top 50 globally imported items consistently over the last three years. This clearly reflects the divergence between the dynamic products demanded in the international market and what Punjab is currently supplying by way of exports, and the potential to increase this. These are: 'Parts and accessories, for tractors, motor vehicles for the transport of ten or more persons' (HS code-870899); 'Medicaments consisting of mixed or unmixed products for therapeutic or prophylactic purposes'

[3]Analysing 5 PCs at 6-digit HS code for each of the consolidated 10 products at 2 digit level would give 50 PCs at 6-digit HS code in total to be analysed in detail. However, only three HS 6 digit codes fall under HS code '10', and hence only three 6 digit PCs under HS code-10 have been considered for the final analysis

(HS code-300490); 'Articles of iron or steel, n.e.s. (excluding cast articles or articles of iron or steel wire)' (HS code-732690); 'Parts suitable for use solely or principally with spark-ignition internal combustion piston' (HS code-840991); 'Food preparations, n.e.s.' (HS code-210690); 'Articles of plastics and articles of other materials' (HS code-392690); and 'Light oils and preparations, of petroleum or bituminous minerals' (HS code-271012). Additionally, a brief industry wise classification (at HS 2 digit) of all the product champions is presented in Table 10, with their exports from Punjab. The Table also highlights the share of those sectors in India's exports in 2017. It may be noted that the data given in the Table is not the total exports for the same sectors from Punjab. The data given in the Table is simple aggregation of exports from the State, for the identified PC products at HS-6 digit level.

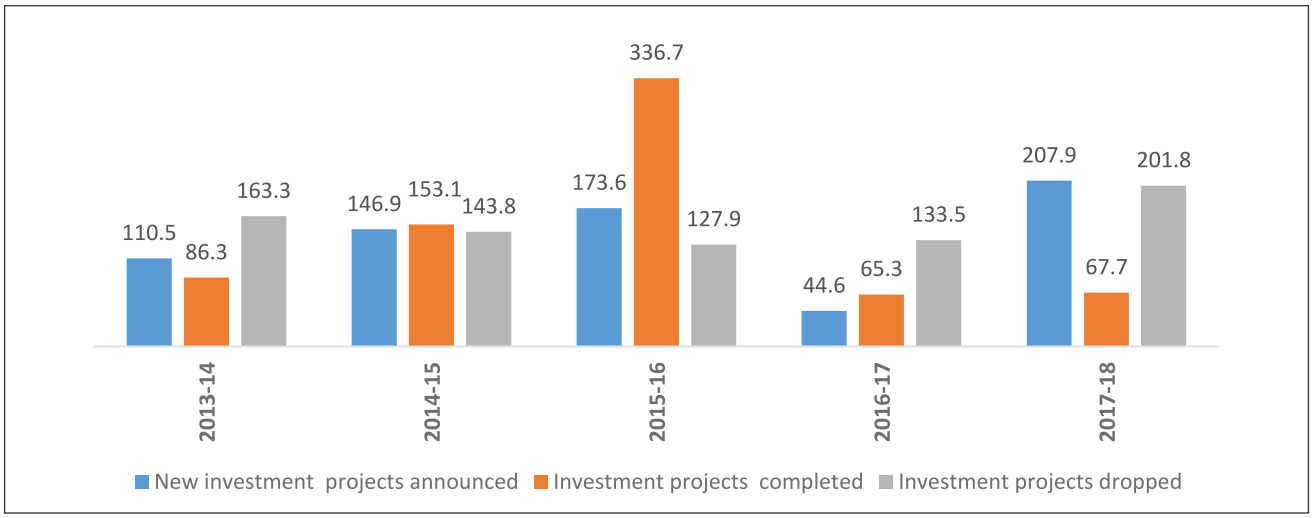
3. INVESTMENT SCENARIO

Punjab has traditionally been a recipient of investments from both domestic as well as foreign sources. However, in order for the Government to push exports from the State to a significantly higher growth trajectory, attracting investments, especially through the FDI route, becomes a sine qua non. FDI, an important source of capital, supplements domestic private investment, boosts economic growth, leads to employment generation, and has the potential to facilitate technology transfer to the host regions. Recognizing the importance of FDI for economic development and exports, the Government of India initiated the 'Make in India' programme which aims at promoting the country as an important investment destination and a global hub for manufacturing, design and innovation. The Government of Punjab has set up the Punjab Bureau of Investment Promotion as the single point of contact for regulatory clearances and approval of fiscal incentives to facilitate investors setting up a business in Punjab.

3.1. Investment Trends

According to the Centre for Monitoring Indian Economy (CMIE) States of India database, new projects worth ₹207.9 billion were announced in Punjab in 2017-18, which represents a huge increase over 2016-17, when projects worth ₹44.6 billion were announced. There were 60 new projects that were announced in 2017-18, signifying substantial investments in each project. In 2016-17, 54 number of projects were announced.

Figure 6: Investment Scenario in Punjab (₹ billion)



Source: Centre for Monitoring Indian Economy; EXIM Bank Research

Table 11: Investment projects outstanding and under implementation in Punjab (₹ billion)

	Investment projects outstanding under implementation	Investment projects outstanding	Under Implementation as a % of total outstanding
2013-14	1,708.6	2,403.8	71.1%
2014-15	1,668.2	2,319.3	71.9%
2015-16	1,289.7	2,096.7	61.5%
2016-17	1,106.8	2,003.7	55.2%
2017-18	1,274.6	2,167.9	58.8%

Source: Centre for Monitoring Indian Economy; EXIM Bank Research

However, with regard to project completion, the State performed only moderately in 2017-18. The investment projects completed in 2017-18 amount to ₹67.7 billion, which is the lowest in the last 5 years except for 2016-17, when it was registered at ₹65.3 billion. Additionally, investment projects that were dropped in 2017-18 (₹201.8 billion) were the highest between the period 2013-14 and 2017-18 – as many as 81 projects in Punjab were dropped in 2017-18, which was the highest number during the last 2 decades, a cause of concern for the State. In terms of the value of the projects, investment projects dropped were 3 times more than investment projects completed in 2017-18, the highest in the last 5 years.

Another vital parameter to assess the investment scenario in the State can be to evaluate the outstanding projects. In 2017-18, projects worth ₹2167.9 billion were outstanding, of which projects to the tune of ₹1274.6 were under implementation. In fact, the percentage of projects under implementation within the total projects outstanding has decreased from 71.1% in 2013-14 to 58.8% in 2017-18.

3.2. FDI in Punjab: An Analysis

As far as the information provided by the Department of Industrial Policy & Promotion (DIPP), Chandigarh, Punjab, Haryana and Himachal Pradesh, together received FDI equity inflows[4] cumulatively amounting to approximately US$ 1.5 billion during April 2000 to March 2018. The data is collated by DIPP from RBI's regional office at Chandigarh, which provides combined information for Chandigarh, Punjab, Haryana and Himachal Pradesh. The recent annual trends in FDI into these States indicate that combined equity inflows amounted to US$ 25 million in 2015-16 and fell to US$ 6 million in 2016-17. The same displayed a significant jump in 2017-18 with equity inflows rising to US$ 108 million.

Using a combined data on FDI to represent any individual State could provide a misleading picture and does not lend itself to apposite analysis. In order to get a fair indication of foreign investment flowing into Punjab, the DIPP data is supplemented by using the data from fDi Markets database of the Financial Times, which provides disaggregated data not only at the State level but also breaks it up at a sectoral level[5]. The fDi Market database tracks capex investments across borders in a new physical project or expansion of an existing investment thereby creating new jobs and capital investment[6]. It may be noted that joint ventures are only included where they lead to a new physical operation. However, to the extent that this database tracks capex investments announced, it is likely that the data may be an over estimation, given that not all announcements fructify into actual investments. Notwithstanding the same, the capex data from fDi Markets provides a strong indicative assessment of how the State is perceived as an investment destination by foreign investors.

According to the fDi markets database, during 2008 to 2017, Punjab accounted for 1.0% of the estimated number of projects and 1.4% of the estimated total envisaged foreign capex (EFC, here after) in India. During the same period, Punjab accounted for 1.6% of the estimated total EFC in India in the category 'New Projects' (the other two categories are 'Expansion' and 'Co-location'). During this period, the State was host to 81 envisaged projects by 60 companies, which together accounted for about 26,800 jobs. The capex envisaged in these projects amounted to US$ 5.9 billion, averaging to about US$ 72.5 million per project.

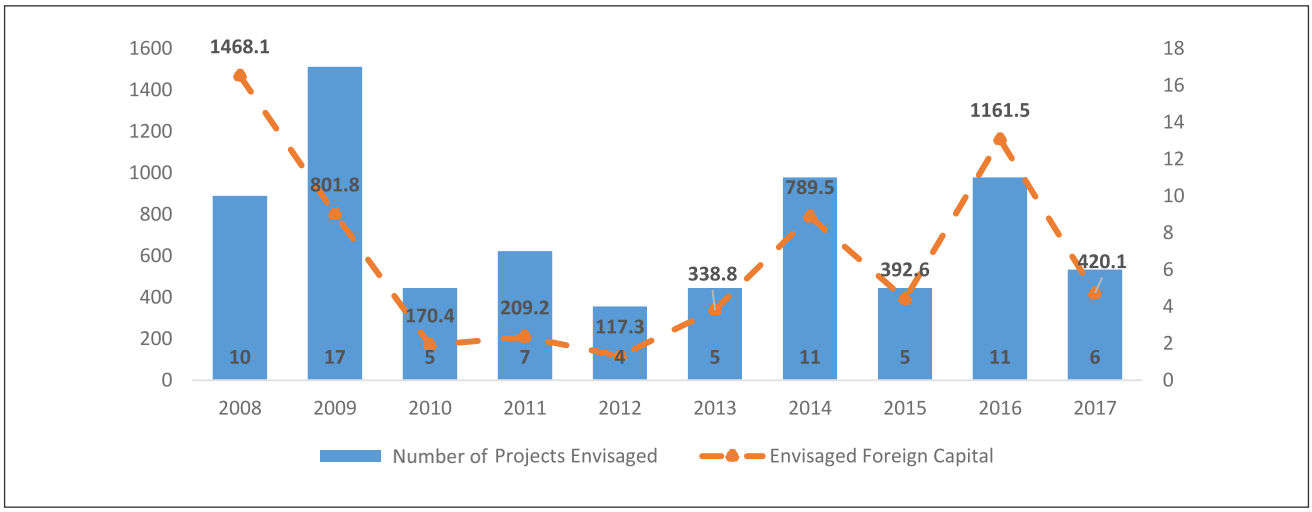
Over the last decade, that is, during 2008 to 2017, the highest amount of EFC in Punjab was in the year 2008, amounting to US$ 1.5 billion (through 10 projects), which means, over one fourth of the EFC in Punjab during 2008 to 2017 was accounted for in a single

[4]The Region-wise FDI inflows are classified as per RBI's – Regional Office received FDI inflows

[5]The fDi markets database is a collation of information from secondary sources like newswires and internal information sources; other media and business sources; industry organizations and investment agencies; and data purchased from market research and publication companies

[6]The data on capital investment 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 could be different to the official data on FDI flows.

Figure 7: Envisaged Foreign Capex in Punjab (US$ Million)



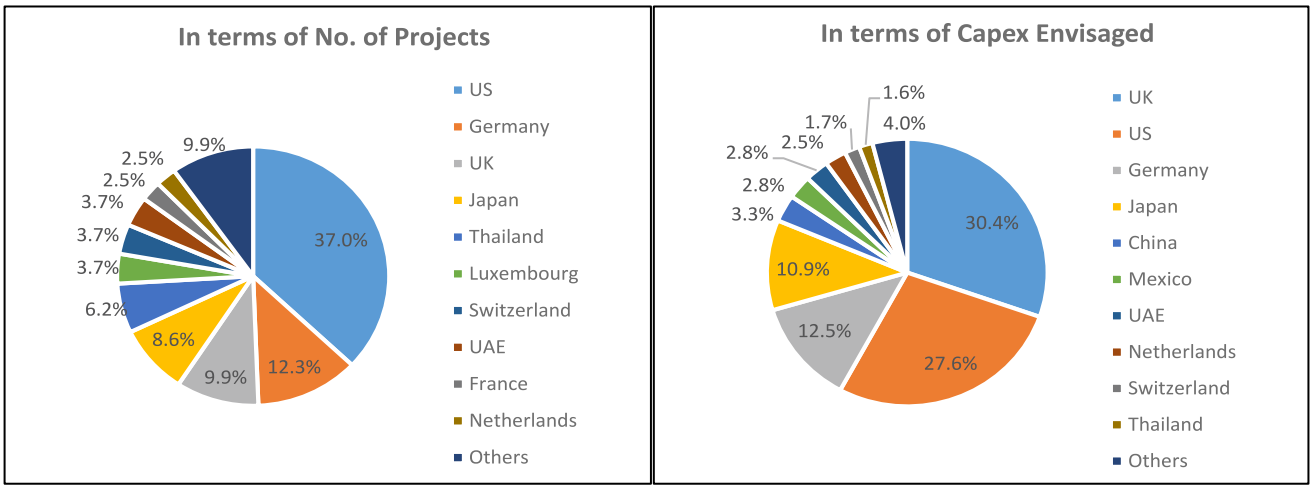
Source: fDi Markets; EXIM Bank Research

year. The closest that Punjab could reach to the 2008 level of EFC was in the year 2016, when EFC amounted to US$ 1.2 billion from 11 projects. In the year 2017, the State anticipated a capex investment of only US$ 420.1 million through 6 projects, which was a fall of more than 63% year-on-year (Figure 7).

Additionally, it is important to assess the source countries which have shown desire to bring in foreign capex into Punjab. As far as the number of projects are concerned, the United States expressed the highest number of projects for capex investment into Punjab at 30, which was more than one-third of the total number of projects envisaged in the State during 2008 to 2017. The top 10 source countries accounted for over 90% of the envisaged projects, with the US (37.0%) and Germany (12.3%), together accounting for approximately half the number of projects.

With respect to the amount of EFC during 2008 to 2017, the UK leads the way with almost US$ 1.8 billion EFC in Punjab, equivalent to 30.4% of the total EFC to the State, during this period. The top 10 sources accounted for 96% of the EFC to Punjab, with the UK and the US together accounting for 58%. Further, the highest amount of EFC during 2008 to 2017 was by Talwandi Sabo Power, a subsidiary of Vedanta Resources (UK) at US$ 953.3 million.

Figure 8: Top Source Countries for Envisaged Foreign Capex in Punjab (2008 to 2017)



Source: fDi Markets; EXIM Bank Research

A sectoral break-up of EFC reveals that real estate was the leading sector amounting to US$ 1556.8 million of EFC, representing a share of 4.5% of the total EFC, to this sector in India during 2008 to 2017. In fact, real estate alone accounted for more than 25% of the EFC to the State during this period. This was followed by 'Coal, Oil and Natural Gas' sector which saw US$ 953.3 million worth of EFC, representing a share of 2.6% in India's total EFC to this sector. It may also be observed that the healthcare sector has been one of the leading sectors for EFC in Punjab in terms of the share of the State in this sector at the national level. During 2008 to 2017, almost 10% EFC to India in the healthcare sector was meant for Punjab. Food and tobacco is another sector that has performed well, with investment envisaged to Punjab accounting for 8.1% share in India's total EFC to this sector, during 2008 to 2017.

3.3 Potential Sectors for Attracting Investment: An Assessment

Punjab has seen a total of US$ 7.1 billion foreign capex envisaged during 2003 to 2017, as per the fDi markets database of Financial Times. During the same time period, India observed EFC worth US$ 597.5 billion. Punjab garnered a 1.2% share in EFC to India during this period. However, neighbouring States such as Haryana (4.7% share); Delhi (3.1%); Rajasthan (3.1%); and Uttar Pradesh (2.3%), have performed better in terms of their shares in the EFC, despite having similar conditions as Punjab (for instance, in terms of geography – all these states are landlocked).

Given the increasing importance of foreign capex investments in augmenting exports from a country or a region, it is necessary to identify sectors where FDI can be attracted not only to serve the domestic

Table 12: Envisaged Foreign Capex into Punjab – Industry wise: 2008 to 2017 (Value in US$ Mn)

Sector	Punjab	India	Share of Punjab
Real Estate[7]	1556.8	34735.7	4.5%
Coal, Oil and Natural Gas	953.3	35985.2	2.6%
Financial Services	814.3	28335.9	2.9%
Food & Tobacco	609.8	7517.8	8.1%
Transportation	407.4	14834.2	2.7%
Healthcare	278.4	2838.8	9.8%
Pharmaceuticals	216.0	4129.9	5.2%
Automotive OEM	202.1	24522.8	0.8%
Warehousing & Storage	189.8	10967.2	1.7%
Leisure & Entertainment	166.4	2591.8	6.4%
Non-Automotive Transport OEM	121.5	5947.2	2.0%
Beverages	92.8	2382.3	3.9%
Metals	45.3	46175.7	0.1%
Textiles	43.4	2862.4	1.5%
Consumer Products	40.6	9148	0.4%
Others	131.5	199680	0.1%
Total	**5869.4**	**432654.9**	**1.4%**

Source: fDi Markets; EXIM Bank Research

[7]FDI is not allowed in real estate business or construction of farm houses in India. However, FDI in the real estate sector is allowed in construction of townships, residential or commercial premises, roads, bridges and Real Estate Investment Trusts (REITs) registered with SEBI.

market but also, and perhaps more significantly, third country markets. GU, Weishi et al. (2008)[8], in their Study tried to assess the impact of FDI on exports on a sectoral basis in the Chinese context. The empirical results in their Study suggested that FDI had a statistically significant and positive impact on China's exports. More specifically, this effect remained positive in thirteen out of fourteen sectors analysed in the Study. The Study noted that FDI does not impact exports equally in all industries, and therefore, it was critical to specify sector-specific FDI policy. The Study notes that in China's case, export of electrical machinery and transport equipment industries benefitted the most from FDI, followed by paper and paper products. While such a study has not been done in the Indian context, anecdotal evidence would suggest that FDI in India would have had similar implications. Given this, attracting FDI that engenders and drives exports from Punjab would form a key strategy for the State in its efforts of upscaling its international trade. Considering that the State is competing for FDI not only with other states but also with other regions/countries, identification and prioritisation of sectors for attracting FDI becomes critical.

In order to do so, the Revealed Comparative Advantage (RCA) methodology for identifying key target sectors for inward investment has been used[9]. Although historically the limited availability of FDI data has hindered the application of RCA theory to FDI, the availability of new Greenfield FDI datasets now makes the application possible. These datasets (unlike most trade datasets) can be disaggregated to the sub-national level, enabling inter-industry comparative advantage analysis for states, regions, counties and cities[10].

At the regional level, the RCA-FDI can be computed in the following way:

$$\text{RCA-FDI} = \frac{(FDI_{kj}/FDI_{k})}{(FDI_{ij}/FDI_{i})}$$

Where,

RCA-FDI: Revealed Comparative Advantage in Foreign Direct Investment for a region

FDI_{kj}: FDI into region k (Punjab, in this case) in sector j

FDI_{k}: total FDI into region k (Punjab, in this case)

FDI_{ij}: FDI into country i (India, in this case) in sector j

FDI_{j}: total FDI into country i (India, in this case)

The above mentioned model presumes that the sub-national regions, i.e. the different states of India, are primarily competing for FDI with each other and not with any country/region overseas. A score of more than 1 will indicate that Punjab has an RCA in the sector for inward FDI. A score of less than 1 will indicate that Punjab has a revealed comparative disadvantage in the sector for inward FDI. It may be noted that in the model, the Envisaged Foreign Capital (EFC) has been used as a proxy to the FDI.

The analysis based on the RCA methodology has been undertaken at the sub-sectoral level for the cumulative time period during 2003 to 2017 and has been further analysed in 3 phases to mitigate any possible aberrations. The three phases chosen are 2003-2007; 2008-2012; and 2013-17. The RCA methodology for inward investment was applied on 52 sub-sectors for 3 parameters, namely, capital envisaged; number of projects; and jobs created.

Each parameter would reveal the comparative advantage of a particular sector as per that particular parameter. For instance during the 15 year period (2003-17), 'fossil fuel electric power' sector has exhibited an RCA of 4.76 by the Envisaged Foreign Capex (EFC) received in Punjab; an RCA of 7.83 by the number of projects in Punjab; and 5.73 by the jobs created in Punjab by these projects – so in a way it showcases competitiveness of Punjab, within India across these three parameters.

It may also be noted that any sub sector would not necessarily display a comparative advantage/

[8]'The Contribution of Foreign Direct Investment to China's Export Performance: Evidence from Disaggregated Sectors''

[9]The RCA-FDI methodology is based on the research published by fDi Intelligence and Wavteq (https://www.fdiintelligence.com/Locations/How-to-identify-target-sectors-for-inward-investment)

[10]fDi Markets

disadvantage for all the 3 parameters. For instance, in the analysis for the period 2003 to 2007, it is observed that 'Breweries & distilleries' had an RCA of 1.99 by EFC and 10.13 by the number of projects. However, with respect to jobs, the RCA for the same sector was registered at 0.47. Hence, in this case while EFC and number of projects show an advantage, in terms of job creation, the State seems to be lagging behind.

On similar lines, it may also be observed that there might be cases where a particular sector displays a comparative advantage for a parameter during one period, while it does not hold any competitiveness in another period for the same parameter. For instance, 'Pharmaceutical preparations' sector displays a comparative advantage for EFC in the period 2008 to 2012 (7.70), but doesn't hold a comparative advantage for the same parameter during 2003 to 2007 (0.57). The reason for different values for different phases is that the RCA value is dependent on four factors, namely, FDI in a particular sector in Punjab; total FDI in Punjab; FDI in a particular sector in India; and total FDI in India. In a case, where there is no FDI received for a particular sector in Punjab during a particular period, the RCA is not listed.

Overall, for the period 2003 to 2017, the results show that 35; 42; and 31 out of total 52 sub sectors have revealed comparative advantage (having greater than 1), according to the EFC received; number of projects; and jobs created, respectively. By all the parameters, 'Animal production' emerges out to be the sector with the highest RCA. Additionally, sectors such as General medical & surgical hospitals (10.57); Food & Beverage Stores (9.49); Bakeries & tortillas (8.00); Outpatient care centres & medical & diagnostic laboratories (6.34); Insurance (6.34) are some of the many sectors that have shown a significant RCA by foreign EFC.

Table 13: RCA Index as per the FDI received in Punjab (2003 to 2017)

Industry Sub sector	By Envisaged Foreign Capex				By Number of projects				By Jobs			
	2003-17	2003-07	2008-12	2013-17	2003-17	2003-07	2008-12	2013-17	2003-17	2003-07	2008-12	2013-17
Animal production	84.23	-	-	64.69	109.64	-	-	94.11	86.26	-	-	84.31
Crop production	25.49	-	19.84	33.74	18.27	-	14.39	23.53	28.40	-	4.39	66.43
Animal food	11.58	-	-	23.24	15.66	-	-	31.37	9.68	-	-	26.17
Animal slaughtering & processing	11.25	-	-	8.70	27.41	-	-	31.37	17.42	-	-	17.30
Fruits & vegetables & specialist foods	10.81	-	14.27	-	10.28	-	13.14	-	9.20	-	9.53	-
General medical & surgical hospitals	10.57	-	5.50	19.79	8.22	-	9.16	6.27	7.36	-	5.28	9.14
Food & Beverage Stores (Food & Tobacco)	9.49	15.65	13.83	-	9.82	6.91	17.37	-	5.33	4.80	7.91	-
Bakeries & tortillas	8.00	121.25	-	-	7.83	76.00	-	-	10.51	101.85	-	-
All other food	6.68	-	-	7.74	5.77	-	-	7.84	5.25	-	-	6.86
Insurance	6.34	-	14.10	1.64	9.78	-	17.46	2.35	5.78	-	12.23	1.99
Outpatient care centres & medical & diagnostic laboratories	6.34	-	-	8.18	4.77	-	-	7.84	4.51	-	-	9.66
Snack food	5.26	-	9.75	-	6.09	-	12.59	-	6.25	-	9.67	-
Performing arts, spectator sports, & related	4.95	-	8.28	-	4.22	-	6.71	-	2.96	-	4.05	-
Residential building construction	4.80	-	8.65	4.11	7.00	-	8.76	9.41	6.35	-	7.50	7.35
Fossil fuel electric power	4.76	-	-	5.85	7.83	-	-	13.44	5.73	-	-	9.34
Grains & oilseed	4.23	-	-	4.70	2.81	-	-	4.48	1.64	-	-	2.72
Railroad rolling stock	4.09	-	-	5.49	3.13	-	-	4.28	0.16	-	-	0.36
Other rubber products	4.09	-	-	10.55	6.09	-	-	15.68	35.04	-	-	64.38
Dairy products	3.98	41.64	-	-	8.43	38.00	-	-	3.88	33.64	-	-
Commercial & institutional building construction	3.59	10.63	-	2.67	4.98	13.82	-	3.76	3.95	11.70	-	3.39
Real estate services	3.56	0.09	6.33	-	3.13	5.43	3.25	-	5.68	0.23	7.19	-

Pharmaceutical preparations	3.28	0.57	7.70	-	2.27	2.49	4.38	-	3.61	2.04	6.18	-
Soft drinks & ice	3.24	-	-	5.08	6.09	-	-	13.44	1.14	-	-	2.37
Freight/Distribution Services	2.67	1.17	1.26	3.97	3.45	2.11	1.24	5.59	1.78	0.70	0.66	4.23
Wireless telecommunication carriers	2.27	12.62	-	-	1.91	7.24	-	-	0.23	0.88	-	-
Clothing & clothing accessories	1.58	-	3.75	0.55	0.91	-	1.18	1.40	4.06	-	9.70	1.27
Electronics & appliances stores	1.55	3.34	-	-	2.07	3.90	-	-	0.10	0.18	-	-
Automobiles	1.54	4.28	0.04	2.14	1.46	1.85	1.33	1.40	3.31	8.75	0.04	3.26
Warehousing & storage	1.42	-	-	4.88	1.57	-	-	5.88	1.01	-	-	5.52
Water transportation	1.39	-	2.55	-	1.41	-	2.72	-	0.87	-	1.82	-
Nonstore retailers	1.36	-	-	1.13	3.13	-	-	3.76	1.27	-	-	1.43
Rental & leasing services	1.31	-	6.01	-	2.15	-	7.19	-	1.64	-	5.27	-
Textile machinery	1.13	-	-	2.49	12.18	-	-	26.89	1.00	-	-	2.28
Investment management	1.07	-	3.14	-	1.89	-	4.58	-	1.07	-	2.98	-
Agriculture, construction, & mining machinery	1.06	2.99	1.08	-	2.51	4.61	2.88	-	1.95	5.02	1.20	-
Jewellery & silverware	0.97	7.79	-	-	1.20	6.91	-	-	0.84	6.22	-	-
Breweries & distilleries	0.81	1.99	-	-	3.78	10.13	-	-	0.21	0.47	-	-
Gasoline stations	0.77	1.26	-	-	5.22	8.00	-	-	5.63	7.72	-	-
Other fabricated metal products	0.76	-	1.73	-	2.55	-	4.58	-	0.41	-	0.84	-
Accommodation	0.64	2.14	-	-	0.75	2.45	-	-	0.75	2.21	-	-
Advertising, PR, & related	0.62	-	-	2.01	0.78	-	-	2.94	0.66	-	-	2.86
Paints, coatings, additives & adhesives	0.55	-	-	1.05	0.57	-	-	1.16	0.22	-	-	0.65
Retail banking	0.46	-	-	0.93	0.62	-	-	1.37	0.36	-	-	1.05
Motor vehicle gasoline engines & engine parts	0.40	1.45	-	-	0.88	4.90	-	-	0.43	1.23	-	-
Wired telecommunication carriers	0.31	1.44	-	-	1.37	3.71	-	-	0.31	0.75	-	-
Business support services	0.23	0.83	-	-	0.52	1.48	-	-	0.32	0.76	-	-
Medical equipment & supplies	0.18	-	0.28	-	1.34	-	2.34	-	0.14	-	0.28	-
Communications equipment	0.11	0.24	0.23	-	0.66	1.36	1.16	-	0.14	0.12	0.45	-
Custom computer programming services	0.08	-	0.21	-	0.23	-	0.76	-	0.03	-	0.07	-
Heavy duty trucks	0.07	-	-	0.27	2.28	-	-	6.72	0.07	-	-	0.25
Software publishers, except video games	0.05	0.22	-	-	0.20	0.66	-	-	0.05	0.12	-	-
Cosmetics, perfume, personal care & household products	0.00	0.02	-	-	1.01	3.53	-	-	0.00	0.01	-	-

Source: fDi Markets; EXIM Bank Research

4. REALISING EXPORT POTENTIAL OF PUNJAB

An export strategy is one of the critical components for the competitiveness of any State. While trade and commerce is a subject of the Union List, the building blocks of such activities, including agriculture and industry, are with the State Governments. It is therefore important that the State creates and integrates an export strategy as part of their economic plan. Punjab has a legacy in agricultural production, whilst having a sound industrial base. The State may take a holistic view, and plan a strategy for promotion of exports from Punjab which would entail strategizing across various levels. Some strategies aligned to product, institutional framework, policy initiatives, amongst others have been delineated in this chapter below.

PRODUCT STRATEGY

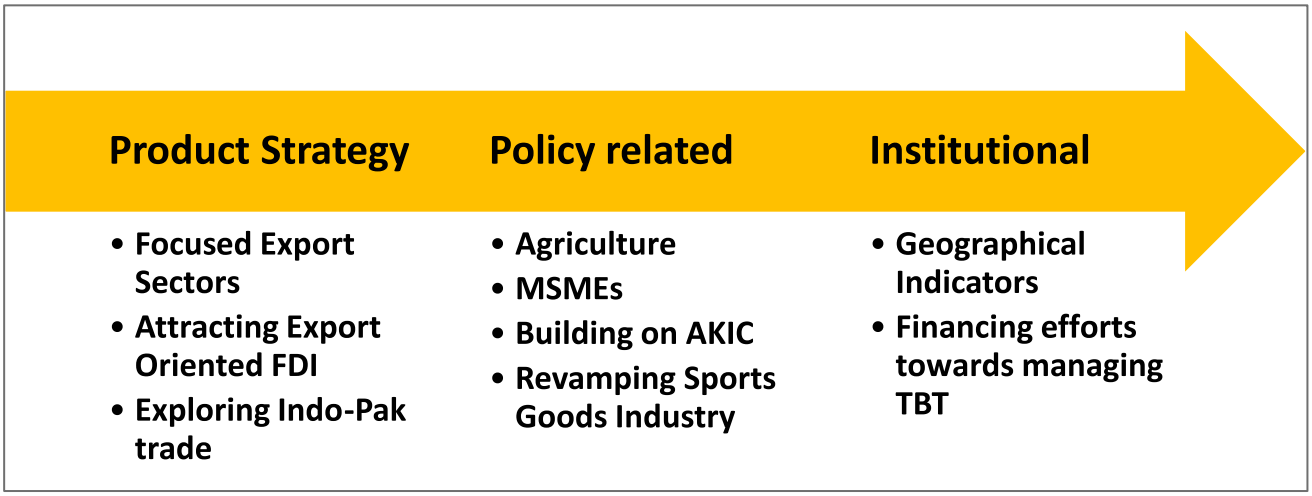
4.1. Focused Export Sectors

Every State has a latent potential to export which needs to be first identified and then appropriately channelized to garner more foreign exchange revenues for the State. In Chapter 2, the analysis on exports from Punjab was undertaken after aggregating all the product champions (349) at HS-6 digit commodities to industry level. Annexure 1 lists down 48 product champions at HS-6 digit level, which represent 78.4% of the exports of all the product champions. The products have not only witnessed robust demand in the international market over the last 5 years – and are likely to follow the increasing trend going forward – but have also been the ones where Punjab has exhibited increasing export competitiveness.

As has been highlighted previously, the State should ideally strive to increase its share in India's exports targeting a 2.24% share[11] by 2024-25, from its current level of 1.95%. Providing special focus on these identified product champions (48) could help the State in getting closer to this target. This can be supplemented by ironing out the export infrastructure and policy bottlenecks prevalent, in the sectors to which these 48 products belong to. This could further facilitate exports of nearly US$ 3.3 billion from Punjab (the untapped export potential), more than half the present total exports of the State.

In order to assist developing countries in identifying promising products for inclusion into export

Broad Framework towards Enhancing Punjab's Exports



Source: Exim Bank Research

[11]Assuming that it reaches back to its share of 2013-14

promotion activities, the ITC, Geneva has developed an export potential assessment methodology. It is based on decomposition of a country's potential exports of a product to a given target market into three factors: supply, demand and easiness to trade. According to this methodology, export potential for different products at HS 6 digit level is listed down vis-à-vis the actual exports of India.

Table 14 is a case of business as usual, that is, had the policies been in place and right markets were targeted, the current exports of 47 items from Punjab would have been US$ 6.6 billion (Actual current exports US$ 3.3 billion + Untapped exports US$ 3.3 billion). Suitable strategies will be required for creating an enabling environment across these sectors, as also for undertaking capacity building in sectors with high potential for exports. Select such strategies are discussed in the following section.

Table 14: Export Potential of Punjab analysing select Product Champions (at 6 digit level)

Major PCs	Description	India's untapped export potential (US$ Million)	Punjab's share in India's exports	Punjab's Untapped export potential (US$ Million)
100630	Semi-milled or wholly milled rice, whether or not polished or glazed	9100	16.0%	1453.3
870899	Parts and accessories, for tractors, motor vehicles for the transport of ten or more persons	2700	6.8%	183.1
20230	Frozen, boneless meat of bovine animals	3200	5.6%	180.3
730840	Equipment for scaffolding, shuttering, propping or pit-propping	234.9	71.5%	167.9
630260	Toilet linen and kitchen linen, of terry towelling or similar terry fabrics of cotton	693.8	20.6%	142.9
820411	Hand-operated spanners and wrenches, incl. torque meter wrenches, of base metal, non-adjustable	150.4	86.8%	130.5
610520	Men's or boys' shirts of man-made fibres, knitted or crocheted	190.2	58.0%	110.3
731815	Threaded screws and bolts, of iron or steel, whether or not with their nuts and washers	496.3	21.0%	104.4
610990	T-shirts, singlets and other vests of textile materials, knitted or crocheted (excluding cotton)	699	11.6%	81.0
730890	Structures and parts of structures, of iron or steel, n.e.s.	533.2	14.8%	78.7
401150	New pneumatic tyres, of rubber, of a kind used for bicycles	86.9	79.7%	69.2
610910	T-shirts, singlets and other vests of cotton, knitted or crocheted	2100	2.8%	58.9
520523	Single cotton yarn, of combed fibres, containing >= 85% cotton by weight and with a linear density of 192,31 decitex to < 232,56 decitex "> MN 43 to MN 52"	220.6	25.8%	57.0
871499	Parts and accessories, for bicycles, n.e.s.	132.9	39.0%	51.8
871200	Bicycles and other cycles, incl. delivery tricycles, not motorised	67.3	72.8%	49.0
520524	Single cotton yarn, of combed fibres, containing >= 85% cotton by weight and with a linear density of 125 decitex to < 192,31 decitex "> MN 52 to MN 80"	246.6	19.4%	47.9
731819	Threaded articles, of iron or steel, n.e.s.	82.7	43.2%	35.8
871493	Hubs and free-wheel sprocket-wheels for cycles	38.2	78.8%	30.1
610590	Men's or boys' shirts of textile materials, knitted or crocheted	57.7	46.8%	27.0
871491	Frames and forks, and parts thereof, for cycles, n.e.s.	51.3	49.7%	25.5
820570	Vices, clamps and the like (excluding accessories for and parts of machine tools)	41.9	52.0%	21.8
820559	Hand tools, incl. glaziers' diamonds, of base metal, n.e.s.	63.7	33.0%	21.0

840890	Compression ignition internal combustion piston engine "diesel or semi-diesel engine"	535.1	3.6%	19.4
732690	Articles of iron or steel, n.e.s. (excluding cast articles or articles of iron or steel wire)	639.8	2.7%	17.0
400921	Tubes, pipes and hoses, of vulcanised rubber (excluding hard rubber), reinforced or otherwise combined only with metal, without fittings	55.3	27.1%	15.0
400300	Reclaimed rubber in primary forms or in plates, sheets or strip	103.7	13.6%	14.1
520513	Single cotton yarn, of uncombed fibres, containing >= 85% cotton by weight and with a linear density of 192,31 decitex to < 232,56 decitex "> MN 43 to MN 52"	41.1	32.7%	13.5
820320	Pliers, incl. cutting pliers, pincers and tweezers for non-medical use and similar hand tools	28.5	45.1%	12.9
840991	Parts suitable for use solely or principally with spark-ignition internal combustion piston	191.3	5.4%	10.3
840999	Parts suitable for use solely or principally with compression-ignition internal combustion	606.8	1.7%	10.2
610343	Men's or boys' trousers, bib and brace overalls, breeches and shorts of synthetic fibres	35.1	26.0%	9.1
820130	Mattocks, picks, hoes and rakes, with working parts of base metal	13.5	57.7%	7.8
843290	Parts of agricultural, horticultural or forestry machinery for soil preparation or cultivation	28.9	25.6%	7.4
845210	Sewing machines of the household type	9.8	74.7%	7.3
20421	Fresh or chilled sheep carcases and half-carcases (excluding lambs)	136.7	3.6%	5.0
20629	Frozen edible bovine offal (excluding tongues and livers)	96.2	4.0%	3.8
400932	Tubes, pipes and hoses, of vulcanised rubber (excluding hard rubber), reinforced or otherwise combined only with textile materials, with fittings	9.2	36.4%	3.4
630130	Blankets and travelling rugs of cotton	63.4	4.0%	2.6
630510	Sacks and bags, for the packing of goods, of jute or other textile bast fibres of heading 5303	129.6	1.9%	2.4
20441	Frozen sheep carcases and half-carcases (excluding lambs)	5.1	41.4%	2.1
401693	Gaskets, washers and other seals, of vulcanised rubber	25.7	6.5%	1.7
630492	Articles for interior furnishing, of cotton	230.5	0.6%	1.4
630210	Bedlinen, knitted or crocheted	18.3	7.1%	1.3
520527	Single cotton yarn, of combed fibres, containing >= 85% cotton by weight and with a linear density of 83,33 decitex to < 106,38 decitex "> MN 94 to MN 120"	22.3	5.4%	1.2
100829	Millet (excluding grain sorghum, and seed for sowing)	43.3	2.5%	1.1
100710	Grain sorghum, for sowing	29.5	3.1%	0.9
20621	Frozen edible bovine tongues	1.2	6.5%	0.1
Total		**24287.5**	**-**	**3298.1**

Source: Collated from ITC Trade Map

Note: Table lists down 47 instead of 48 Product Champions as potential for HS 520299 is not available

4.2. Attracting Export Oriented FDI

In order for Punjab to achieve an export target of over US$ 10 billion in the next 5 years, an important component will be to attract the FDI, especially those that bring exports. Achieving this objective would entail not only encouraging foreign companies to participate in the 'Make in India' initiative in Punjab but also incentivise foreign companies to invest into high-technology sectors, especially those that are a part of the Global Value Chains (GVCs). This would not only improve the quality of products and bring in professionalism in the way the State does business,

but more importantly provide a strong push to the exports from the State. As the quality of the products so manufactured in Punjab improves, it will gradually get integrated into the GVC. This in fact has been a case which China has successfully implemented. In China, a large part of exports can be attributed to foreign companies, unlike India, where a major proportion of exports are accounted for by home-grown companies. Given the relatively low levels of FDI inflows that Punjab has received, it is important for the State to identify key sectors where a sustained focus yields positive results, both in terms of investments and exports. Attracting export-oriented FDI would entail mapping international demand with current and prospective capacities of Punjab across sectors. This would also include shortlisting sectors which have shown dynamic international demand and for which capacities are either not present in the State, or even if present, are too low to serve the export market. Additionally, the approach should lay special emphasis on sectors with high value and job creation capabilities.

Foreign Capital Expenditure: Sector-State Analysis

The previous chapter identified and highlighted various sectors on the basis of revealed comparative advantage of these sectors, under different parameters. These sectors were considered to be investment friendly for Punjab vis-à-vis the other States and were ranked on the basis of their RCA. In addition to attracting the foreign capital in these sectors, the Government of Punjab may also consider attracting investments in sectors which are export oriented. These sectors might not be exporting much at present, however, have the capability to garner higher revenues due to their medium to hi-tech or high value addition nature. To assess these sectors, it will be important to analyse the annual trends in foreign capital expenditure across sectors and across different States of the country.

According to the fDi markets database of the Financial Times, during January 2003 to December 2017, cumulative foreign capital expenditure commitments into India aggregated to US$ 485.7 billion. The top 5 States in terms of the value of capital investment envisaged were Maharashtra (17.5%); Karnataka (14.6%); Andhra Pradesh (12.1%); Tamil Nadu (11.7%); and Gujarat (9.2%). These States together accounted for approximately 65% of the total capital investment commitments during this period. One of the reasons for these States occupying the top spots in foreign capital expenditure announced is their geographical advantage - all these States have a large coastline and are home to well-developed port infrastructure. Hence comparing them with Punjab, which ranked 16th in terms of foreign capital expenditure commitments and accounted for a share of 1.4% during the same period, may not be strictly correct. However, it is to be emphasised that landlocked States of Haryana (5.8%); Delhi (3.9%); Rajasthan (3.7%); UP (2.8%) and even Chhattisgarh (2.3%) were host to a higher value of foreign capital expenditure commitments than that of Punjab during this period, creating a case for the State to analyse the reasons and take corrective actions accordingly.

Table 15 presents a summary of foreign capital expenditure commitments into some of the medium to high technology or high value added sectors, and compares them in terms of foreign capital expenditure commitments for India and Punjab. To put things in better perspective, the table also shows data on foreign capital expenditure inflows to other landlocked States in these sectors.

As is evident from Table 15, for most of the sectors identified for the purpose of attracting FDIs, Punjab has clearly lagged behind when compared to its neighbouring States. There have been some sectors such as electronic components; semiconductors; business machines and equipment; aerospace; engines and turbines; biotechnology; and space & defence, where Punjab has not been able to attract even a single project with foreign capital commitment over the past fifteen years. Some of these sectors not only have a tendency to increase exports but are also considered as huge job creators. Here, the State government can identify select cities in Punjab and undertake a focused and dedicated approach by creating a sector specific environment to attract the FDI in these segments.

Table 15: Sector-wise Foreign Capital **envisaged** for India and Punjab: A Comparison

Sector	India Capex envisaged (US$ million)	Share of the sector in foreign capital expenditure envisaged to India	Number of Projects in envisaged India	Punjab Capex envisaged (US$ million)	Punjab share by capex envisaged	Punjab's rank by capex envisaged	Punjab's rank by number of projects envisaged	Observations
Automotive OEM	31402.9	6.5%	263	535.9	1.7%	10	13	The neighbouring State of Haryana has a share of 5.1% by capital expenditure envisaged with 16 projects, while Rajasthan has a share of 4.9% with just 6 projects.
Software & IT services	31011.2	6.4%	1829	20.1	0.1%	19	16	The sector has been the largest job creator during 2003 to 2017 in the foreign capital expenditure envisaged sectors, amongst others and does not depend on the locational advantage. For instance, Bengaluru is on the top of the list of foreign capex envisaged in the sector with a share of 27.3%. Even Gurugram and Noida have a combined share of 11% in the capex envisaged in this sector in India, during 2003 to 2017. In terms of states, Karnataka, Andhra Pradesh and Maharas htra have a combined share of 68.7 % by capital expenditure envisaged. UP has a share of 8.3%, while Haryana and Delhi have a share of 4.4% and 2.8%, respectively.
Electronic Components	19362.4	4.0%	258	-	-	-	-	Punjab has not been a destination for any foreign capex envisaged in this sector. Top 4 states, namely, Gujarat, Karnataka, Andhra Pradesh and Tamil Nadu account for 70 .5% of the capex envisaged. Delhi and Haryana have a share of 2.1% and 1.9% in the capex envisaged , respectively.
Automotive Components	17617.8	3.6%	418	41.2	0.2%	17	18	Haryana is the third largest and Rajasthan is the sixth largest on the list with 15.1% share and 6.4% share by capital expenditure envisaged, respectively.
Industrial Machinery, Equipment & Tools	16495.5	3.4%	714	62.0	0.4%	16	14	Haryana (4.8%), Delhi (2.3%), UP (2.1%) and Rajasthan (2.1%), all have a higher rank than Punjab by capital expenditure envisaged. Even by the number of projects envisaged, Delhi, Haryana, UP and Rajasthan, rank higher than Punjab.
Chemicals	13840.4	2.8%	370	31.8	0.2%	22	18	The share of all neighbouring states such as Haryana, UP, Rajasthan, Delhi, Himachal Pradesh and Uttarakhand is higher than Punjab's share for this sector. Delhi and Haryana, have 20 and 9 projects envisaged, respectively.
Semiconductors	10006.7	2.1%	158	-	-	-	-	Punjab doesn't have any foreign capex envisaged in this sector. On the contrary, UP had foreign capital envisaged of US$ 1425.7 million through 10 different projects, while for Delhi and Haryana, 9 and 3 projects, were envisaged, respectively.

Business Machines & Equipment	2148.4	0.4%	152	-	-	-	-	This sector also didn't observe any foreign capex envisaged for Punjab. On the other hand, Delhi is the third largest on the list of foreign capital envisaged at 13.1%. Haryana and UP have a share of 7.8% and 7.6%, respectively. Even Himachal Pradesh, has a share of 3.6% by capex envisaged. Foreign capital expenditure envisaged into this sector has created over 1500 jobs in UP, and over 1000 jobs each in Haryana and Delhi.
Pharmaceuticals	6008.8	1.2%	147	226.2	3.8%	7	10	Among the neighbouring states, only Haryana has a higher share of 4.9% than Punjab, by foreign capital expenditure envisaged.
Non-Automotive Transport OEM	5162.6	1.1%	75	121.5	2.4%	12	13	While Punjab's performance has been decent, the neighbouring State of Haryana has the third largest share by capex envisaged at 12.1%, and is the highest job creator at 8383, through foreign capital expenditure envisaged in this sector in India. In terms of number of projects envisaged also, Haryana was the highest recipient at 15 projects.
Aerospace	5142.7	1.1%	98	-	-	-	-	Delhi (4.9%), UP (2%) and Haryana (2%) have registered decent shares by foreign capex envisaged while for Punjab no project was envisaged.
Consumer Electronics	4207.4	0.9%	158	0.3	0.0%	20	17	Only 1 project for Punjab was envisaged in this sector. UP (7 projects) and Haryana (8 projects), each have a share of more than 10%, in the capex envisaged in this sector.
Engines & Turbines	3856.8	0.8%	58	-	-	-	-	Among the landlocked states in India, only Haryana and Delhi have foreign capital expenditure envisaged in this sector.
Medical Devices	3110.2	0.6%	88	6.6	0.2%	11	12	Haryana and Delhi have shares of 3.8% and 0.9% in foreign capital expenditure envisaged in this sector, respectively.
Biotechnology	1204.5	0.2%	47	-	-	-	-	Haryana had a share of 2.1% in this sector's capex envisaged while Himachal Pradesh and Delhi have a share of 1.3% and 1.2%, respectively.
Space & Defence	665.6	0.1%	18	-	-	-	-	Whilst Punjab didn't feature in any foreign capex envisaged in this sector, Delhi (23.8%) and Haryana (11%) performed quite well.

Source: fDi Markets; EXIM Bank Research

Underachievers as target sectors for Attracting FDI

Out of the 3623 items at the HS 6 digit level exported by Punjab in 2017, 1841 items can be classified as 'Underachievers'. This means that the world demand of these items has grown faster than the average demand for all products in the last 5 years. This also reflects that the share of such products in world imports has increased, reflecting their growing demand. An added feature of such products is that exports of Punjab, of these products, have not been competitive, as reflected in their normalised RCA values. The analysis reveals that the total exports of these items from Punjab amounted to US$ 261 million in 2017, equivalent to only 4.6% of the total exports of the State during that year. Whilst this value appears low, what is important is to realise that one of the reasons for the low share of these products in total exports of Punjab is the limited supply capacities in the State. Thus, for such sectors, the bottleneck is the supply side, given that international demand for such products has remained dynamic and is likely to remain as robust, going forward. This bottleneck can be overcome through attracting FDI for capacity creation.

Table 16: Sectors associated with underachievers from Punjab in 2017

Industry	HS Code	Exports from Punjab in 2017 (US$ Million)	Punjab's share in India's exports (2017)	India's share in World's exports (2017)
Machinery; Electrical equipment etc.	84-85	67.24	0.48%	0.47%
Pharmaceuticals	30	35.62	0.34%	3.13%
Railway locomotives and other vehicles	86-89	29.45	0.25%	1.55%
Agriculture and allied	1-24	27.36	0.18%	1.95%
Plastics; rubber and their articles	39-40	15.95	0.44%	0.77%
Chemicals and allied	28-29; 31-38	14.39	0.14%	2.11%
Apparels	61-62	13.92	0.43%	1.91%
Textiles	50-60; 63	11.26	0.18%	3.46%
Toys; games; sports requisites and other articles	94-96	9.29	0.48%	0.58%
Other Base metals and their articles	74-83	9.09	0.17%	2.05%
Optical; photographic; medical instruments and clocks	90-92	5.67	0.24%	0.56%
Iron & Steel and their articles	72-73	5.00	0.05%	3.97%
Leather articles etc.	41-43	3.88	1.18%	0.78%
Wood; pulp of wood and other articles	44-49	3.79	0.42%	0.66%
Precious Metals; Precious or semi-precious stones etc.	71	3.26	0.02%	11.01%
Footwear; Headgear etc.	64-67	2.64	0.17%	1.61%
Articles of stone, plaster etc.	68-70	1.97	0.17%	1.02%
Mineral products	25-27	1.06	0.06%	3.09%
Arms & Ammunition	93	0.16	0.25%	1.10%
Works of art etc.	97-98	0.00	0.00%	0.36%
Total		**261.00**	**0.23%**	**1.42%**

Source: UN Comtrade; DGCIS; EXIM Bank Research

In order to get a sectoral perspective, these 1841 products at HS-6 digit level have been aggregated at HS 2-digit levels in order to identify the focus sectors for investment. Table 16 lists down the exports of aggregated sectors (at 2-digit level) from Punjab, its share in India, and the share of India's exports of same sectors in the world. It may be noted that exports of these sectors as given in Table 16 do not represent the total exports of these sectors, neither for India or Punjab. In other words, the data given in Table 16 are cumulated data of HS codes (6-digit level) that are identified and classified under the Underachievers' category. A list of major Underachievers has been given in Annexure 2.

As is evident, many of the sectors in Table 16 are high technology or high value sectors, signifying that the value realisations would typically be far higher if competitiveness in such products are improved to an extent that could help them metamorphose from Underachievers to Product Champions, thereby helping Punjab realise its export target of over US$ 10 billion over the next five years.

4.3. Exploring India - Pakistan Trade

The India - Pakistan merchandise trade was registered at US$ 2.25 billion in 2017 (0.3% of India's total trade), with exports by India being US$ 1.78 billion and imports by India being US$ 0.47 billion. Albeit, this trade has grown immensely from US$ 0.23 billion in

2001, it has remained stagnant in the last decade. The trade between India and Pakistan was recorded at US$ 2.14 billion in 2008, US$ 2.56 billion in 2010 and reached an all-time high of US$ 2.7 billion in 2014.

Though the existing levels of trade may sound reasonable, it is vital to note that there exists a trade potential of more than US$ 10 billion between India and Pakistan. As per a study by Indian Council of Research on International Economic Relations (ICRIER) in 2007, a bilateral trade potential of US$ 11.7 billion existed between India and Pakistan, conditional on the appropriate measures taken by the governments of both the nations.

The ICRIER study had identified export potential of US$ 2.2 billion from Pakistan to India, and US$ 9.5 billion from India to Pakistan per annum. Of the top 50 potential export items from Pakistan at that time highlighted in the Study, India was importing 45 from countries other than Pakistan. This situation remains largely unchanged even now. Additionally, the bulk of Indian exports to Pakistan is still made up of commodities that were being traded earlier.

There are lot of policy bottlenecks for the stagnation in the trade of both the nations. For instance, Article 1 of the General Agreement on Tariffs and Trade (GATT), 1994, requires every WTO member country to accord Most Favoured Nation (MFN) status to all other member countries. Whilst India accorded the MFN status to Pakistan in 1996, a Pakistani cabinet decision of November, 2011 to reciprocate this, remains unimplemented. In March 2012, Pakistan substituted a "Positive List" of a more than 1,950 tariff lines permitted for import from India, by a "Negative List" of 1,209 lines that could not be imported.

Further, obstacles such as weak logistics and customs processing, and technical barriers to trade such as sanitary or phytosanitary (SPS) restrictions, visa and travel restrictions, and lack of financial intermediation and telecommunication connectivity are some of the other challenges in the trade.

Central and State Governments of both the nations can indulge in dialogue and undertake various steps *to* use the untapped trade potential. For example, rail-linked Inland Container Depot (ICD) at the Integrated Check Post (ICP) at Attari, is one of the steps that is expected to become a reality soon. At present, 10,000 trucks of rice per month go to Ludhiana and then to Kandla and Jamnagar ports (both in Gujarat) for export to Pakistan. This entails exorbitant logistic cost. With the coming up of direct rail ICD, there will be no more haulage charges. Recently,the Government of India also released ₹40 crore for installing two sets of scanners at the ICP, which will help in saving time and also prevent the smuggling of illegal goods.

Further, India can explore the unexplored channels such as electricity, for trade with Pakistan. As per a Study by IIM Ahmedabad done in 2016, "Tariff and related matters: The electricity sector in Punjab", Punjab, which has a massive ₹1.34 lakh crore debt, can utilize the border to substantially increase its annual revenue collection. Further, it highlighted, "Pakistan is facing acute energy crisis at the moment. There is scope to export power to Pakistan. The total available capacity for generation of power in Pakistan was only 12,361 megawatts (MW) as in April 2016". The study added that electricity production rates of Punjab, as well as in India would be competitive and commercially viable to export to Pakistan. A significant power remains idle in Punjab, India largely because demand peaks only between June and September, triggered by the summer and the paddy growing season.

POLICY RELATED STRATEGY

4.4. Freight issue in the State

During the course of the preliminary research and interactions with exporters from across sectors in Punjab, freight issues propped up as a key sore in the State's exports. Currently, the exporters from Punjab prefer to send their consignments to the ports by road rather than railways. This is because, the cost under the road route is significantly lower than the rail. At the same time the consignment from road is often delivered faster than the rail route.

According to the exporters, from Ludhiana in Punjab to Mundra port in Gujarat, they end up saving somewhere in the range of INR 12000 to INR 20000 whilst using road over railways. The exporters prefers rice shipments to be moved by road in open trucks as Mundra port provides free warehousing facility to them for attracting business.

Further, as India already faces a huge competition from other countries in exporting products, it becomes important to deliver the product on time so as to not lose advantage over other countries, both in terms of cost as well as time. The exporters in Punjab are of the opinion that while the road route lets them deliver a full container load of exports to vessel in 3-4 days, the rail route in its comparison can take somewhere around 13-14 days.

The Inland Container Depot (ICD), in addition, is levying various additional charges such as surveyor charges, data charges, documentation charges, and infrastructure development charges. This is again an important reason for many exporters shifting to road network from the rail route.

It is also to be noted that Punjab imports a lot of raw materials from other states and countries, so as to manufacture the final product in Punjab. For instance, Jalandhar imports raw rubber from Kerala; pig iron and steel are imported from Jharkhand and Odisha to manufacture nut-bolt; and motor parts, hand tools and gym equipment from Jharkhand, Odisha; amongst others. It imports gun metal from Europe for manufacturing valves and cocks and bath fittings. Major items for making sports goods are imported from China while furnace oil comes from Jamnagar. As per the exporters, average time taken by import containers to reach the ICD, Ludhiana, from the gateway port is around 3-4 weeks. As a result, the exporters who work on time bound deliveries become sensitive to losing their future orders.

It is essential for the policy makers to intervene herein so as to rationalise the freight charges, especially those being levied by CONCOR, which is a Public Sector Undertaking under the Ministry of Railways, so that the exporters from Punjab become competitive vis-à-vis the exporters from the other states.

4.5. Agriculture

The importance of agriculture for Punjab can be assessed from the fact that the allocation for agriculture was estimated at ₹ 14,734 crore by Punjab Government in the budget 2018-19, a jump of 40% over the 2017-18 budget, which in turn was a jump of 66% over the 2016-17 budget. This means, in the last two years, the allocation to agriculture has increased by almost 131%. There are various caveats to this increase in allocation every subsequent year. The allocation in 2018-19 also includes ₹4,250 crore for waiving off debt to small and marginal farmers. Another, ₹6,256 crore has been earmarked for the free power to the agriculture sector.

It may be noted that Punjab which has been at the forefront of Green Revolution thereby increasing crop yield, today has reached a near crisis situation in the agricultural sector. The kind of farming required in the Green Revolution was a combination of seeds, irrigation, chemicals and fertilizers. It also required a fertile area with a sufficient surface and ground water for irrigation. Given these factors, Punjab was an appropriate destination for the Green Revolution. With the support of Central Government in terms of canal network, tube wells, electricity, pricing, institutional credit etc., the State made a substantial shift towards two crops - wheat and rice, and as a result the area under other crops declined.

Additionally, due to the very nature of the cropping pattern introduced during the Green Revolution, the groundwater in Punjab has been overexploited. According to the Economic Survey of Punjab, 2017-18, as of 2017-18, 1.36 million number of energised tube wells/pumps are being operated in Punjab. Another study done in 2014[12], mentions that out of 137 blocks, 103 blocks in Punjab are overexploited, 5 blocks are critical, 4 blocks are semi critical and only 25 blocks are in safe category, with regard to

[12]Water Quality Issues and Challenges in Punjab (March 2014) conducted by Central Ground Water Board and Ministry of Water Resources.

groundwater table. In fact, most of the blocks in central Punjab fall under the 'over exploited' category, which interestingly happens to be the rice belt of Punjab.

All these have resulted in Punjab facing issues like stagnant productivity in agriculture, declining profits, increasing costs, degrading soil, receding water availability amongst others. This eventually is leading debt ridden farmers in the State, and in some cases even leading to farmer suicides. The Economy Survey of Punjab 2017-18 noted, "Agriculture sector which is the backbone of the rural population is facing its worst crisis due to large indebtedness and day-to-day suicides committed by the farmers. Although, the State contributes major share of rice and wheat to the national pool, yet the agriculture has become non-profitable activity for small and marginal farmers who are under huge debt. The high dependence on rice and wheat and over-exploitation of land has led to unforeseen complex problem. The rapidly depleting water table in face of non-adoption of micro-irrigation and high toxicity of soil because of over-use of fertilizers and pesticides has led to unfolding of health issues reflected in the high incidence of cancer and kidney failure."

There could be some possible solutions to this. First, strengthening the research and development through the institutional modes such as the Punjab Agriculture University (PAU), and through adequate funding, encourage the agricultural scientists to come up with the ideas related to alternative patterns of cropping. This is going to not just promote the existing exports but also may help in diversifying. Additionally, a Department of Psychology could be considered and set up within the PAU, which will be specialised in dealing with farmer and farm labourer issues so as to reduce their distress. The Government may also consider to undertake a holistic approach in determining the number of agricultural labourers in the State. This is because the loan waiver is only benefiting the farmers and not the farm-labourers.

Further, free electricity which is being provided to all the farmers since 1997, needs to be rationalized - one, for the reason that a large number of blocks for the groundwater in Punjab are already in the dark zone, and second, this may also lead to diversification from the production of just paddy to other crops. In fact, as per a CAG report, out of the total subsidy given by Punjab, power subsidy, including to farmers, accounted for 85% to 99%, during 2012-13 to 2016-17. The Government of Punjab may also explore the possibilities of considering the recommendations of Punjab State Farmers' and Farm Workers' Commission. Specific challenges such as the changes required for the pumping technology should also be addressed. For instance, submersible technology is replacing the centrifugal pump sets. However, it is quite unaffordable for a small farmer, to buy the submersible technology, which further dents the financial resources of the farmers.

4.6. MSMEs

The micro, small and medium enterprises in Punjab have traditionally been a stronghold of the State. Some of the major industries in this segment for Punjab have been cycle, auto parts and hosiery units. The presence of big players in Punjab since years have especially made the journey for the MSME sector, a successful one. However, many industries in this sector have been meeting the same fate as that of the farmers.

The biggest issue being faced by the MSME sector is the shortage of the skilled labour. One of the key factors determining this problem is the seasonal migration of the labour to agriculture when the paddy sowing season initiates. As a result, the garment and the hosiery industry of Ludhiana, which is one of the major contributors to the exports of Punjab, suffers due to the mismatch in the demand and supply of the labour. Thus, the daily wage for the skilled labour increases to ₹433-₹500 per day vis-à-vis ₹366 during the time when there is no shortage. The exports from Ludhiana, as a result, to destinations such as Europe and Russia, become less competitive.

The Government of Punjab here can focus on training the local workers, instead of being dependent on the migrant workers. The skill enhancement of the local people will not just generate a greater employment but also will make up for the shortage of the workers

and hold on the export competitiveness of sensitive industries. In fact, the Industrial and Business Development Policy 2017 of Punjab, admits this fact and highlights, "The State has already set up a State Skill Development Mission, which would be further strengthened. The State would ensure convergence of various skill training schemes to bring scale and synergy. The State is conscious of the dire need for the industry to adopt next generation manufacturing to become globally competitive. Given high dependence on low skill labour, re-skilling or up-skilling of existing workforce will be required to make them ready for the new requirements. The State would set up cluster specific skill centres for various manufacturing sectors to ensure skilled workforce for the industry".

Further, not just the workers, but also the exporters need the sector-specific training in order to be aware of the global scenarios, concerning that sector. 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. For instance, the exporters and producers need to be aware of the rules of WTO's 'The Sanitary and Phytosanitary (SPS) Measures Agreement' (sets out the basic rules for food safety and animal and plant health standards) and 'The Agreement on Technical Barriers to Trade (TBT)' (aims to ensure that technical regulations, standards, and conformity assessment procedures are non-discriminatory and do not create unnecessary obstacles to trade). The seminars or workshops, therefore, being organized have to be customised, according to the needs of the stakeholders.

BOX 1: IMPACT OF EXPORTS ON LABOUR MARKET

South Asia's economy is growing faster than any other region in the world. But it remains a development paradox. The exceptionally high economic growth shrunk the number of poor and created modest job growth. A joint study by the World Bank and the International Labour Organization, titled "Exports to Jobs: Boosting the Gains from Trade in South Asia" examined the impact of higher exports on wages, jobs, and on reduction of informality in jobs in South Asia. The findings provide key insights about the relationship between international trade and local labour markets.

The Study observed that if the value of India's exports increases by US$ 100 per worker (based on data from 1999-2011), average annual wages would also increase by ₹572 per worker. This would be equivalent to about US$ 12.7 in 1999 exchange rates, and would mean that about 12.7% of the increase in output is transferred to workers through their wages. The biggest beneficiaries would be tertiary school graduates (₹2,180), older workers (₹1,103), and males (₹655). Further, increased exports from India can explain the conversion of about 800,000 jobs from informal to formal between 1999 and 2011, representing 0.8% of the labour force of the country. The Study also concludes that an increase in exports per worker leads to a greater formalization rate for females than for males (0.9% versus 0.7%).

The Study also undertook a State level analysis in India. In the case of Punjab, it is observed that, there was a 26.5% increase in wages during 1999–2011. The contribution of exports to this increase in wages, stands at 4.5%. Further, a 6.4% decrease in informality in Punjab's economy was also observed, during the same period. The contribution of exports to this decrease in informality stood at 5.3%.

4.7. Revamping the Sports Goods Industry

Jalandhar, better known as the sports capital of the country, is one of the largest exporter of sports goods in Asia. Industrial production of sports goods in Jalandhar began on a small scale during the late forties. Over the years, the sports goods industry has grown at an impressive rate, and of late they are exported to different countries. Jalandhar produces around 90% of the sports items produced in Punjab. The value of exports of sports goods from Punjab in 2016-17 was registered at ₹1080 Crore.

Even with such large numbers pertaining to the production and exports from the city, a reverse trend has been observed where it's losing to its competitors, both domestically and internationally. Though VAT has been subsumed after the GST came into being, it may be interesting to note that during the pre-GST period, a Value Added Tax (VAT) of over 6% was being, levied on the sports goods manufactured in Punjab, while the VAT in UP and Jammu & Kashmir was zero. As a result, Jalandhar, which earlier used to produce majority of sports goods, has seen manufacturing increasingly shifting to Meerut in Uttar Pradesh. GST, however, not applicable for exports, perhaps, has its implications on overall production, and has to be taken into consideration. Currently the GST applicable is between 12-18% on various sports goods.

The priority of the State Government should be to take up the issue of GST levied on this industry in particular. This will not only provide some relief to the dying sports industry of Jalandhar, but also make it globally competitive again. As per the estimates, sports equipment manufacturing industry in Jalandhar still caters to approximately 55% of the country's demand. The industry is estimated to be worth ₹1,800 crore and provides employment to nearly 50,000 people.

Additionally, Indian sports goods exporters face tough competition from Pakistan and China. For instance, the stitching cost of a hand-stitched football costs ₹85 in Jalandhar in India, while the same costs between ₹40 to 45 in Sialkot, Pakistan, due to various factors such as the cheap labour cost in Pakistan (almost half from India).

Understanding the gravity of the situation, the Industrial and Business Development Policy 2017 of Punjab, as a part of its sectoral strategy, envisages to set up a Technology Centre for providing technology support including certification and testing centre for the sports goods in the Jalandhar cluster. Further, it envisages to set up a Sport Goods Park at Jalandhar with best-in-class infrastructure. A common technical research centre and testing facility shall be developed inside the park to ensure ease of access to latest quality testing and certification.

4.8. Amritsar-Kolkata Corridor

The 1318 km Amritsar-Kolkata Corridor or Eastern Dedicated Freight Corridor (EDFC) as it is being called, would extend from Ludhiana in Punjab to Dankuni near Kolkata. The success of this could change the economy of Punjab in particular. The project spans 7 states in India – Punjab, Haryana, Uttar Pradesh, Uttarakhand, Bihar, Jharkhand and West Bengal – and will be covering one of the most densely populated regions in India. Goods' trains will move from Amritsar to Kolkata without any restrains. It may be noted that this EDFC will also leverage on the existing highway system and also on the Inland Waterway System that is being developed along National Waterway - 1 which extends from Allahabad to Haldia.

Estimated total cost of the Amritsar-Kolkata Corridor is around US$ 46 bn. The EDFC is projected to cater to a number of traffic streams-coal for the power plants in the northern region of U.P., Delhi, Haryana, Punjab and parts of Rajasthan from the Eastern coal fields; finished steel, food grains, cement, fertilizers, lime stone from Rajasthan to the industrial and commercial segments in the eastern region.

The corridor is expected to pave ways for export of goods that are manufactured in Punjab to Bangladesh, Myanmar, Thailand and Malaysia. The corridor therefore, other than just to enhance the

Table 17: Traffic Projections on Eastern DFC (in million tons/year)

Direction/Commodity	2016-17	2021-22
Up Direction (from Eastern India to North)		
Power house coal	54.46	61.96
Public Coal	0.61	0.95
Steel	8.24	9.74
Others	1.61	2.96
Logistic Park	1.2	2.4
Sub-total	***66.12***	***78.01***
Down Direction (towards Eastern India from North)		
Fertilizer	0.23	0.42
Cement	0.78	1.52
Limestone for steel plants	4.99	5
Salts	0.68	1.03
Others	1.61	2.96
Logistic Park	1.2	2.4
Sub-total	***9.48***	***13.32***
Grand Total	***75.6***	***91.33***

Source: Ministry of Shipping

economies of the concerned States where a huge chunk of Indian population resides, also has the potential to promote the untapped markets with respect to exports, especially for a State such as Punjab. This is because Punjab has been majorly catering to the countries which lie west to India. For instance, in 2017-18, USA (11.4%); UAE (10.4%); and Iran (6.4%) were the top 3 exporting destinations for Punjab. Bangladesh is the only country, east to India, which had a decent share of 5.6% of Punjab's exports in 2017-18. Thus, the AKIC opens a whole new gamut of opportunities for Punjab, amongst other States, to explore in terms of exports, when it comes to the policy of Act East by India.

This is a region which needs a major push for industrialization and job-creation as this Corridor has the potential to act as a catalyst for growth. The corridor covers major manufacturing hubs like Amritsar, Jalandhar, Ludhiana (all these are in Punjab), Ambala, Saharanpur, Delhi, Roorkee, Moradabad, Bareilly, Aligarh, Kanpur, Lucknow, Allahabad, Varanasi, Patna, Hazaribagh, Dhanbad, Asansol, Durgapur and Kolkata.

The success of the EDFC also has the potential to draw large amount of investments from industrialized nations which would give the much-needed boost to the manufacturing sector in India and are expected to give a fillip to India's quest from raising the share of manufacturing from the current level of 16% to 25% of GDP by 2025.

Other than this, a vital reason of developing this industrial corridor could be the extent of tapping Special Economic Zones (SEZs). Interestingly, out of the 223 SEZs as on 31 March 2018 in India, only 28 SEZs are in the seven States which falls on this Corridor, with no SEZs in Uttarakhand, Bihar and Jharkhand, and only 3 SEZs in Punjab (all in Mohali).

INSTITUTIONAL STRATEGY

4.9. Identifying and Branding of Geographical Indication Products

A Geographical Indication (GI) is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin. In order to function as a GI, a sign must identify a product as originating in a given place. In addition, the qualities, characteristics or reputation of the product should be essentially due to the place of origin. Since the qualities depend on the geographical place of production, there is a clear link between the product and its original place of production[13]. India, as a member of the World Trade Organization (WTO), enacted the Geographical Indications of Goods (Registration & Protection) Act, 1999 which came into force with effect from September 2003.

The geographical indication products can facilitate in the local production and employment generation, and at the same time, build centres which have been away from the industrialization. Such is the potential of the GI products that Florent Gevers, a renowned European IP lawyer, during a 1995 World Intellectual Property Organization (WIPO) symposium, referred to GIs as "Sleeping Beauty".

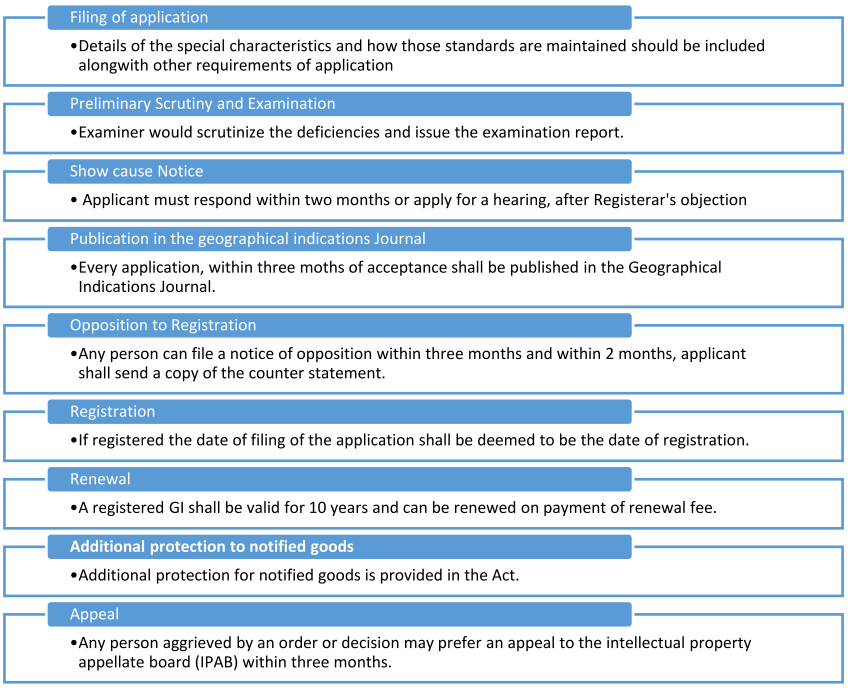
An area of focus for the Government of India in the recent times has been the "Make in India" Programme. One of the objectives of this is to also improve and protect the Indian intellectual property regime.

Table 18: Products that have been granted GI Status in Punjab

Product	Category	States
Phulkari	Handicraft	Punjab, Haryana & Rajasthan
Basmati	Agricultural	The entire states of Punjab, Haryana, Delhi, Himachal Pradesh, Uttarakhand, and parts of western Uttar Pradesh and Jammu & Kashmir.

Source: Geographical Indications Registry; Exim Bank Research

Exhibit 1: The Registration Process for Geographical Indication Status



Source: Geographical Indications Registry

[13]World Intellectual Property Organization (WIPO)

Till date, out of the extensive list of 323 products that have been granted GI status, across all the Indian States, only 2 products carry the name of Punjab, that too jointly with other States. The first GI status was granted during 2010-11 to 'Phulkari' in the Handicrafts segment to the States Punjab, Haryana and Rajasthan. The second was granted in 2015-16 to the globally renowned 'Basmati' in the agricultural sector to the entire states of Punjab, Haryana, Delhi, Himachal Pradesh, Uttarakhand, and parts of western Uttar Pradesh and Jammu & Kashmir.

It is interesting to note that the adjoining State of Himachal Pradesh has 7 GIs registered to its name, with products such as Kullu Shawl; Kangra Tea; Chamba Rumal; Kinnauri Shawl; Kangra Paintings etc. Albeit, Punjab boasts itself with many of the local goods produced by its artisans, it has not been able to reap the benefits of the GI tag due to the low awareness among the artisans.

Punjab here can team up with the other States, just like it has done in the past, to apply for new registration to get the GI tags. It can identify the products that have regional significance which can further be taken up by the central government in order to represent the product at the international level. At a collective level, the application has a possibility of adding more weight to the request and at the same time, it reduces the possibility of the conflict among the States - for instance, what happened between West Bengal and Odisha in the case of 'Rasgulla'; and between Madhya Pradesh and Chhattisgarh for 'Kadaknath Chicken'.

Other than the joint application for the GI tags, the State can also focus on its products such as Punjabi 'jutti' and Patiala 'salwar', and consider them to file for GI tags. Care should also be taken at the State level to educate the artisans to reap the benefits. This is because, the primary purpose of the same is to preserve the art and at the same time, the artisans can charge a premium to the normal price. This would not only bring the domestic revenue to the State but also add substantial export earnings.

4.10. Financial efforts towards managing Technical Barriers to Trade/Standards

Technical Barriers to Trade (TBT) are measures relating to technical regulations and standards, and procedures for assessment of conformity. These are increasingly emerging as a challenge for the exporters. TBTs can be in the form of certifications, packaging and labelling requirements, re-test of shipments for conformity, etc. The usage of Non-Tariff Barriers (NTBs) especially in developed countries, with mostly TBTs, discourage exporters from entering these markets.

For Punjab, it is even more important given that it is a key producer and exporter of agriculture and allied products, which remains one of the most protected sectors for majority of the trading nations. Standards in the sector are stringent, and compliance with these standards requires significant investment. Many developing countries, including India face the twin challenges of inadequate research and development facilities as well as good quality lab network services to improve and upgrade product qualities as per the requirements of Good Agriculture Practices (GAP), Hazard Analysis and Critical Control Point (HACCP), etc. The investment requirements for HACCP plants are large as most of the capital goods related to the plant need to be imported from the developed countries. The installation cost of HACCP plants varies from ₹10 million to ₹25 million. Further, on an average, an export processing firm is estimated to spend about ₹2 million per year to maintain a HACCP plant[14].

There are several standards and certifications in other sectors as well. For example, the “Communauté Européenne (CE)” marking is essential for exports to Europe of products such as medical devices, simple pressure vessels, electrical and electronic products, building materials, gas-fuel-fired equipment, toys, etc. Equipment used in potentially explosive atmospheres within the EU are also required to comply with the ATEX directive. Similarly, China

[14]Export of Horticultural Products from India: Economic Impact of Cost of Compliance for Food Safety Measures; Association of Asia Scholars

requires certain imported products to have Chinese Compulsory Certification. These include several categories of auto-components, electrical equipment, electronics, etc. In Russia as well, industrial products containing pneumatic products are required to conform to the standards prescribed by GOST-R. In addition, a certificate of conformity is required at customs clearance.

In order to encourage exporters, the State can share a portion of the expenses incurred for such compulsory certifications. Depending upon the turnover of the exporting unit, the State can bear 50-100% of the certification / compliance cost.

Conclusion

This Study on Punjab's exports has taken into account various aspects from identifying product based export potential to finding out countries from whom Punjab will be facing competition in the international arena. Further a detailed analysis of the envisaged foreign capital investments over a period has been undertaken thereby showcasing its implications especially on job creation.

The untapped potential of the State, if channelled in the right direction, will be able to propel Punjab's exports, thereby achieving a target set by the Study of US$ 11.8 bn on the optimistic side, and contribute 2.24% to India's exports by 2022-23, which actually was Punjab's share earlier in 2013-14.

Punjab has a legacy of contributing significantly to India's exports. However, as discussed in the Study, the State has slipped from this level in the last few years. Given India's focus on exports, and the opportunity for the State to contribute towards achieving the target, whilst competing with other States, it is an opportune moment to devise its own Export Strategy document which will delineate its focus areas towards augmenting exports from the State.

Annexure 1

List of product champions and their major export destinations for Punjab (2017)

HS 2 digit	Exports of PCs from Punjab at 2 digit (US$ Million)	Major PCs at 6 digit under the sector	PC Description	Exports from Punjab at 6 digit (US$ Million)	Major exporting destinations for Punjab	World Imports (US$ Million)	Major World Importers	Share of major world importers	Major competitors for India in major importing countries	India's share in major importer	India's rank in major importer
10	1098.8	100630	Semi-milled or wholly milled rice, whether or not polished or glazed	1098.2	Iran (33.2), Saudi Arabia (13.5), UAE(11.8), Iraq (9.9), Qatar (5.3)	17411.8	China	8.4	Viet Nam (61.3), Thailand (26.1), Cambodia (6.9), Pakistan (3.9), Myanmar (1.4)	0	12
							Iran	7	India (68.9), Pakistan (19), Thailand (4.3), Switzerland (2.6), UAE (1.9)	68.9	1
							Saudi Arabia	5.5	India (75), USA(10.4), Pakistan (7.2), Thailand (3.4), Australia (2.1)	75	1
							UAE	4.3	India (76.8), Pakistan (14.7), Thailand (3.1), Viet Nam (2.8), USA(1.5)	76.8	1
							Bangladesh	4.1	India (99.2), Pakistan (0.7), Thailand (0.1)	99.2	1
		100829	Millet (excluding grain sorghum, and seed for sowing)	0.4	UAE(97), Nepal (3)	130.4	Indonesia	12.3	USA(92.4), Ukraine (3.3), China (3.2), Canada (0.9), Russia (0.2)	0	10
							Germany	9	Ukraine (23.4), Austria (16.6), China (13.6), France (12.6), Poland (9.9)	1.6	11
							Iran	8.1	Azerbaijan (61.8), Russia (26.7), UAE (10.1), Ukraine (0.8), Turkey (0.7)	0	9
							Belgium	6.3	France (26.9), Ukraine (18.5), Netherlands (14.9), India (11.6), Germany (9.5)	11.6	4
							South Korea	5.7	China (89.9), USA(6.1), India (1.5), Russia (1.3), South Africa (0.6)	1.5	3
		100710	Grain sorghum, for sowing	0.2	Pakistan(100)	153.5	Mexico	12.4	USA(100)	-	-
							Eritrea	12.3	NA	NA	NA
							Sudan	9.7	USA(99.7), India (0.3)	0.3	2
							Djibouti	8.9	NA	NA	NA
							South Africa	7.1	USA(88.4), Australia (10), Zambia (0.3), Botswana (0.2), Swaziland (0.1)	0	12

61	560.4	610520	Men's or boys' shirts of man-made fibres, knitted or crocheted	157.9	UAE(67.7), USA(6.3), Panama Republic (5.1), Saudi Arabia (4.8), Netherlands Antilles (2.2)	2110.3	USA	42.1	Viet Nam (30.8), China (11.6), Jordan (11.5), Thailand (5.7), Indonesia (5.4)	1	17
							Japan	12.1	China (61.3), Viet Nam (22.5), Indonesia (6.9), Myanmar (3), Thailand (2.7)	0	15
							UK	6.3	China (16.2), Bangladesh (15.6), Pakistan (14.7), Viet Nam (8), Netherlands (5.6)	1.2	14
							South Korea	4.5	Viet Nam (62.7), China (12.9), Indonesia (7.4), Myanmar (6.2), Thailand (3.6)	0.1	17
							Germany	4.2	Turkey (22.9), China (11.3), Bangladesh (11.2), Portugal (7.9), Viet Nam (7.3)	1.4	14
		610990	T-shirts, singlets and other vests of textile materials, knitted or crocheted (excluding cotton)	115.7	UAE(50.3), USA(15), South Africa (7.5), Saudi Arabia (4.2), Myanmar (3.8)	13484.4	USA	14.1	China (15.3), Mexico (12.5), Honduras (11.1), Nicaragua (9.9), Viet Nam (8.7)	0.9	16
							Germany	11.8	Turkey (27.7), China (17.2), Bangladesh (8.7), Cambodia (7.4), Viet Nam (3.3)	3	6
							Japan	7.8	China (55.3), Viet Nam (22.7), Bangladesh (8.3), Indonesia (5.6), Thailand (2.3)	0.1	20
							UK	6.7	Turkey (22.3), China (14.8), Bangladesh (10.2), Belgium (7.3), Cambodia (7)	3.4	8
							France	6.4	China (19.1), Turkey (15.4), Cambodia (6.9), Bangladesh (6.4), Italy (5.7)	4.3	8
		610590	Men's or boys' shirts of textile materials, knitted or crocheted	64.8	UAE(53.9), USA(29), Saudi Arabia (3.3), Panama Republic (2), Colombia (1.7)	336.6	Malaysia	10	China (85.6), Thailand (2.5), Viet Nam (2.4), India (1.7), Indonesia (1.2)	1.7	4
							Saudi Arabia	9.5	China (80.6), India (7.6), Bangladesh (5.1), Viet Nam (3.4), Indonesia (0.8)	7.6	2
							Portugal	8.1	Spain (96.7), France (1.7), Italy (0.9), China (0.5), Germany (0.1)	0	28
							France	6.8	Italy (38.3), Portugal (19.2), Netherlands (7.1), Spain (6.3), Germany (5.1)	0.4	18
							UK	6.6	Pakistan (40.9), China (19.4), Italy (7.9), Turkey (7.2), Bangladesh (6)	1.9	8

		610910	T-shirts, singlets and other vests of cotton, knitted or crocheted	48.0	USA(29.4), UAE(27.4), Estonia (10.3), France (6.1), Myanmar (6.1)	24885.7	USA	15.8	Honduras (13.7), Nicaragua (9.8), El Salvador (9.4), China (9), Dominican Republic (7.6)	5.5	9
							Germany	10.7	Bangladesh (38.9), Turkey (13.7), India (9.8), China (5.7), Italy (3.1)	9.8	3
							UK	6.8	Bangladesh (27.4), Turkey (13.1), India (10), China (5.6), Netherlands (5.5)	10	3
							France	5.6	Bangladesh (31.7), India (11.6), Turkey (9.6), China (8.7), Portugal (7)	11.6	2
							Spain	5	Bangladesh (38), Turkey (13.7), Portugal (9.7), India (8.4), Morocco (5.3)	8.4	4
		610343	Men's or boys' trousers, bib and brace overalls, breeches and shorts of synthetic fibres	27.2	UAE(71.3), Saudi Arabia (12.5), USA(7.3), UK (1.4), Panama Republic (1.4)	2961.3	USA	37	Viet Nam (22), China (15.5), Jordan (7.9), Egypt (6.7), Thailand (6.6)	0.3	23
							Japan	9.9	China (67.7), Viet Nam (12.2), Indonesia (6.4), Cambodia (4.4), Thailand (2.5)	0.2	11
							UK	5.6	China (28.4), Cambodia (13.6), Belgium (13.6), Netherlands (8.3), Italy (6.8)	1.2	14
							South Korea	3.5	Viet Nam (39), China (31.4), Cambodia (8.6), Indonesia (5.8), Thailand (4.2)	0.5	11
							Germany	3.1	China (29.1), Netherlands (7.5), Poland (7.2), Cambodia (7.1), Italy (6)	2.3	11
52	442.7	520523	Single cotton yarn, of combed fibres, containing >= 85% cotton by weight and with a linear density of 192,31 decitex to < 232,56 decitex "> MN 43 to MN 52"	203.2	Bangladesh (32.8), China (20.4), Egypt (5.6), Peru (4.5), Portugal (4)	1387.7	China	22.4	India (47.5), Viet Nam (20.3), South Korea (13.2), China (8.6), Indonesia (5.2)	47.5	1
							Bangladesh	15.4	India (73), China (16.5), Macao, China (4.4), Pakistan (3), Indonesia (1.6)	73	1
							Portugal	7.1	India (52.6), Turkey (35.5), Spain (2.9), Germany (2.3), Pakistan (2.2)	52.6	1
							Turkey	4.4	Uzbekistan (43.3), India (35.6), Tajikistan (9.4), South Korea (2.9), Viet Nam (2.6)	35.6	2
							Hong Kong, China	4.4	China (43.7), India (21.6), Viet Nam (16.7), South Korea (13.9), Pakistan (1.4)	21.6	2
		520524	Single cotton yarn, of combed fibres, containing >= 85% cotton by	154.6	Bangladesh (37.3), China (29.7), Pakistan(20.9) ,Hong Kong (4.2), Egypt (2)	1536.1	China	46.3	India (43.8), Viet Nam (30.1), China (12), Indonesia (7.2), Malaysia (2.4)	43.8	1
							Bangladesh	17.6	India (81.7), China (10.7), Macao, China (3.6),	81.7	1

			weight and with a linear density of 125 decitex to < 192,31 decitex "> MN 52 to MN 80"						Indonesia (2.2), South Korea (0.6)		
							Hong Kong, China	8.9	China (69), India (18.5), Viet Nam (5.6), South Korea (4.2), Pakistan (0.7)	18.5	2
							Pakistan	3.2	India (95.2), China (2.8), Turkey (1.9), Belgium (0.1)	95.2	1
							Viet Nam	2.3	China (64.4), India (24.5), Uzbekistan (7.9), Indonesia (1.7), Thailand (0.6)	24.5	2
		520513	Single cotton yarn, of uncombed fibres, containing >= 85% cotton by weight and with a linear density of 192,31 decitex to < 232,56 decitex "> MN 43 to MN 52"	55.3	Pakistan(46.6), Peru (12.4), South Korea (7.7), Egypt (5.6), China (4.1)	640.9	China	23.4	Viet Nam (51.9), Indonesia (16.3), India (10.5), USA(8.6), Uzbekistan (5.1)	10.5	3
							Turkey	11.9	Uzbekistan (72.7), Viet Nam (9), India (7.8), Tajikistan (4.6), China (3.6)	7.8	3
							Russia	7.9	Uzbekistan (89.9), Azerbaijan (8.7), Kazakhstan (1.2), Turkmenistan (0.1), Turkey (0.1)	0	12
							El Salvador	7.8	USA(93.8), Mexico (2.9), Guatemala (2), Nicaragua (0.7), India (0.3)	0.3	5
							South Korea	6.4	Viet Nam (57.3), India (19.9), Indonesia (13.6), China (4.1), Pakistan (2.4)	19.9	2
		520527	Single cotton yarn, of combed fibres, containing >= 85% cotton by weight and with a linear density of 83,33 decitex to < 106,38 decitex "> MN 94 to MN 120"	6.0	Pakistan(76.8), Japan (10.5), Bangladesh (7.8), South Korea (4), Nepal (0.6)	230.0	Germany	19.7	India (35.3), Austria (24.1), China (22.7), Egypt (10.7), Italy (2.4)	35.3	1
							Pakistan	15.4	India (80.8), China (18.3), Egypt (0.8), Portugal (0.1)	80.8	1
							Italy	11.1	China (54.2), Egypt (18.2), India (14.8), Bosnia and Herzegovina (4.6), Turkey (3.8)	14.8	3
							Bangladesh	7.5	India (89.6), Singapore (9.6), Pakistan (0.7)	89.6	1
							Japan	7.2	India (41.3), China (29), Thailand (14.7), Indonesia (5.9), Pakistan (3.2)	41.3	1
		520299	Cotton waste (excluding yarn waste, thread waste and garneted stock)	5.9	Belgium (55), Poland (18.3), Germany (11.9), Turkey (5.6), Vietnam (3.8)	473.5	Germany	16.9	India (47), Turkey (34.4), Pakistan (6.6), South Korea (2.1), Greece (2.1)	47	1
							China	15.3	Viet Nam (52.4), Indonesia (18.1), India (12.9), Turkey (3.9), Malaysia (2.4)	12.9	3
							Malaysia	7.1	USA(60.1), Australia (12.1), India (7.4), Singapore (4.5), Indonesia (4.2)	7.4	3
							Italy	6.8	Germany (21.8), Turkey (21.2), Pakistan (15.9), India (13.7), Greece (5.1)	13.7	4
							France	6.3	Pakistan (53.5), Turkey (22.6), Germany (13.2), Brazil (4.1), Netherlands (2.7)	2.2	6

73	341.5	730840	Equipment for scaffolding, shuttering, propping or pit-propping	132.7	UAE(25.1), Germany (11.9), Saudi Arabia (8.1), UK (7.2), USA(6.2)	4748.9	USA	9.3	China (56.8), Austria (7.5), Canada (7.4), South Korea (5.6), India (4.3)	4.3	5
							Germany	9.3	Austria (36.1), Poland (21.3), China (9.1), India (4.8), Italy (4.3)	4.8	4
							UAE	5.4	Austria (36.7), India (16.7), Germany (13.4), China (11), Turkey (6.8)	16.7	2
							UK	4.9	China (39.8), Germany (24.4), India (7.9), Sweden (4.9), UAE (3.7)	7.9	3
							France	4.1	Germany (26.9), Tunisia (9.3), Portugal (8.9), Italy (8.7), Austria (7.9)	1.8	12
		730890	Structures and parts of structures, of iron or steel, n.e.s.	61.5	USA(32.3), UK (15.5),UAE(9.3), Saudi Arabia (8.8), Germany (5.5)	32957.6	Norway	12.7	South Korea (74.6), Thailand (6.9), Poland (4.7), Sweden (2.4), Denmark (1.6)	0.1	26
							USA	9.4	China (31), Canada (22.6), Mexico (13.7), Italy (5.6), Germany (4.8)	1.4	11
							Germany	7.2	Poland (18.1), Czech Republic (15), Netherlands (9.1), Austria (6.8), Belgium (6.1)	0.3	25
							Japan	4.7	China (66.4), South Korea (15.1), Thailand (6), Viet Nam (2.9), Philippines (2.1)	0.2	17
							France	3.4	Belgium (23.3), Germany (17.1), Spain (15.6), Italy (9.6) Poland (6.9)	0.5	22
		731815	Threaded screws and bolts, of iron or steel, whether or not with their nuts and washers	54.0	UK (29.9), Germany (8.3), UAE(6.4), Netherlands (5.9), Saudi Arabia (5.6)	18000.6	USA	12.2	China (24.9), Taipei, Chinese (24.1), Japan (14.5), Canada (6.3), Germany (6.3)	2.4	10
							Germany	10.1	Italy (21.7), Taipei, Chinese (8.7), Netherlands (7.5), Czech Republic (7.2), Poland (6.5)	3.1	12
							China	8.4	Japan (28.6), Germany (18.6), USA(11.9), Taipei, Chinese (7.3), South Korea (7.1)	0.1	26
							Mexico	7.8	USA(51.3), Taipei, Chinese (13), China (10.4), Japan (8.1), Germany (4.5)	0.4	13
							France	4	Italy (28), Germany (19.8), UK (8.5), USA(7.9), Taipei, Chinese (5.5)	1.2	13

		731819	Threaded articles, of iron or steel, n.e.s.	36.3	USA(55.9), UAE(26.5), Kuwait (3.9), Qatar (3.7), UK (2.9)	2609.9	Germany	9.1	China (13.7), Switzerland (11.7), France (10.1), Czech Republic (10.1), USA(8.3)	2	13
							France	5.9	Germany (28.2), USA(13.7), China (10.4), Italy (7.1), Spain (4.7)	0.2	24
							USA	4.3	China (31.2), Taipei, Chinese (15.9), Germany (10), France (6.9), Japan (4.7)	1.8	11
							UK	4.1	USA(18.1), China (15.5), Germany (13.7), France (9.4), Italy (7.8)	5.1	8
							Italy	3.4	Germany (25.3), China (22.6), Bulgaria (8.3),USA(7),France(6.3)	1.1	14
		732690	Articles of iron or steel, n.e.s. (excluding cast articles or articles of iron or steel wire)	19.9	UAE(23.3), UK (16.5), USA(16.1), Qatar (9.3), Belgium (5.4)	44210.0	USA	9.2	China (37.5), Mexico (14.1), Canada (11.2), Germany (5.3),Japan(4.2)	2.6	8
							Thailand	8.3	China (49.8), Japan (17), Thailand (7.6), USA(5), Malaysia(3.4)	1.2	10
							Germany	8.3	China (13.4), Czech Republic (11), Poland (10), Italy (9.8), USA(7)	1.1	19
							Mexico	5.4	USA(60.5), China (12.6), Japan (7), South Korea (3.1), Germany (3)	0.6	13
							China	4.4	Japan (21.7), Germany (17.9), USA(12.1), South Korea (10), Taipei, Chinese (6.1)	0.4	23
87	329.8	870899	Parts and accessories, for tractors, motor vehicles for the transport of ten or more persons	168.7	USA(24), Sweden (9.1), Germany (8), Turkey (7), Italy (6.1)	83301.4	USA	16.7	Mexico (31.2), China (14.4), Canada (14.2), Japan (14), South Korea (8.5)	1.8	8
							Spain	10.1	France (54.1), Germany (18.1), Italy (4.3), Portugal (3.2), Czech Republic (2.5)	0.2	23
							Germany	7.4	Czech Republic (13.5), Italy (10.7), Poland (9.3), Austria (8.2), France (7.3)	0.5	24
							France	4.6	Germany (23.2), Italy (11.4), Spain (10), Belgium (5.7), UK (4.9)	0.4	23
							Canada	4.5	USA(61.8), Japan (12.9), Mexico (9.8), China (6.1), South Korea (2.6)	0.7	9
		871200	Bicycles and other cycles, incl. delivery tricycles, not motorised	37.4	Bangladesh (26.9), Mozambique (11), Nepal (8.7), Malawi (8.5), Germany (7.8)	8003.0	USA	17.8	China (66.4), Taipei, Chinese (27.9), Cambodia (1.8), Canada (0.8), Indonesia (0.8)	0	35
							Germany	8.7	Cambodia (21.6), Netherlands (13.3), Taipei, Chinese (10.2), Poland (10), Bulgaria (9.8)	0.4	23

							Japan	8.4	China (87), Taipei, Chinese (11.1), UK (0.5), USA(0.4), Germany (0.3)	0	34
							Netherlands	7.2	Germany (43.2), Taipei, Chinese (24.6), Czech Republic (6.1), Belgium (5.1), Lithuania (3)	0	30
							UK	6.4	Taipei, Chinese (20), Cambodia (16.9), Netherlands (13.1), Germany (7.5), Bangladesh (7.4)	1.4	15
		871491	Frames and forks, and parts thereof, for cycles, n.e.s. (excluding for motorcycles)	25.3	Bangladesh (26.4), Burkina Faso (9.3), Tanzania (8.5), Malawi (7.4), Uganda (7.3)	2343.6	Germany	16	China (48.1), Taipei, Chinese (39.9), Viet Nam (6.9), USA(2.7), Hong Kong, China (1.2)	0	24
							Taipei, Chinese	14.3	China (85.5), Viet Nam (11.1), Japan (1.2), Malaysia (0.8), Italy (0.4)	0	44
							Netherlands	7.1	Taipei, Chinese (59.7), China (29.8), Hong Kong, China (4.7), Viet Nam (2.5), USA(0.9)	0	22
							USA	6.3	Taipei, Chinese (58.5), China (27.6), Italy (5.2), Viet Nam (4.8), Canada (1)	0.1	21
							Italy	4.3	China (59), Taipei, Chinese (23.2), Viet Nam (5.4), Albania (1.6), Netherlands (1.6)	1.5	6
		871499	Parts and accessories, for bicycles, n.e.s.	24.6	Bangladesh (31.9), Burkina Faso (7.3), Tanzania (6.7), Uganda (6.2), Malawi (4.8)	4283.5	Germany	12.9	Taipei, Chinese (27.1), Japan (13.5), Hungary (11.6), China (10.3), Netherlands (7.9)	0	33
							Netherlands	9.2	Germany (30.3), Taipei, Chinese (18.6), China (14.1), Japan (12.2), Belgium (4.3)	0	42
							Taipei, Chinese	6.6	Japan (47), China (27), Germany (7.3), Indonesia (5.4), Viet Nam (2.9)	0	59
							France	6	Taipei, Chinese (39.9), Romania (12), China (9.5), Germany (7.8), Italy (5.2)	0	39
							China	5.5	Taipei, Chinese (33), Indonesia (32.9), Japan (21.6), Malaysia (7.8), Singapore (1)	0	23
		871493	Hubs and free-wheel sprocket-wheels for cycles	18.2	Bangladesh (22.2), Uganda (8.9), Malawi (8.1), Burkina Faso (6.9), Tanzania (6.9)	742.8	Germany	13.7	Japan (35.9), Taipei, Chinese (20.9), Indonesia (12.6), China (12), Malaysia (11.2)	0.1	14
							Netherlands	12.5	Germany (42), Japan (21.8), Taipei, Chinese (13.9), Singapore (6.9), Czech Republic (3.8)	0.2	14
							Singapore	12	Malaysia (66.2), Indonesia (29.2), China (3.5), Taipei, Chinese (0.6), USA(0.3)	0	29
							Taipei, Chinese	5.2	Japan (42.6), China (34.2), Malaysia (9.9), Switzerland (6.6), Indonesia (3.7)	0	32

							China	4.6	Japan (34.4), Taipei, Chinese (32.1), Indonesia (24), Malaysia (4), Czech Republic (2.6)	0	18
02	234.3	020230	Frozen, boneless meat of bovine animals	222.0	Vietnam (53.4), Malaysia (11.4), Egypt (11.3), Iraq (5.9), Indonesia (4.4)	17822.4	China	15.2	Brazil (32.3), Australia (19.6), Uruguay (18.4), Argentina (13.7), New Zealand (11.6)	-	-
							USA	12.3	New Zealand (39.3), Australia (37.6), Nicaragua (7.6), Uruguay (7.3), Mexico (2.5)	-	-
							Hong Kong, China	8.8	Brazil (52.4), USA(31.1), Canada (4), Ireland (1.7), Mexico (1.4)	0.7	12
							Japan	6.6	Australia (57.1), USA (31.4), Canada (4.4), New Zealand (4.3), Mexico (2.2)	-	-
							Egypt	5.7	Brazil (63.7), India (31.6), Paraguay (1.2), USA(0.8), South Korea (0.7)	31.6	2
		020629	Frozen edible bovine offal (excluding tongues and livers)	6.5	Vietnam (72.6), Malaysia (11), Taiwan (6.1), Hong Kong (2.8), Egypt(1.7)	2153	Hong Kong, China	45.5	Brazil (50.6), USA(14.5), Argentina (8.5), Australia (7.6), Uruguay (2.9)	0.7	13
							Mexico	7.6	USA(89.6), Canada (7.6), Australia (1.9), Nicaragua (0.6), New Zealand (0.2)	-	-
							South Korea	7.3	Australia (52.1), USA(33.1), New Zealand (12.3), Canada (2), Chile (0.3)	-	-
							USA	6.7	Australia (30.1), Canada (28), Mexico (16.6), Uruguay (11.5), New Zealand (5.9)	-	-
							China	3.2	Uruguay (59.4), Australia (21.6), New Zealand (16.5), Costa Rica (2.5), USA(0.1)	-	-
		020421	Fresh or chilled sheep carcases and half-carcases (excluding lambs)	4.2	UAE(71.1), Saudi Arabia (22.1), Oman (5.8), Baharain Is (1)	486.2	UAE	21.2	India (79.5), Australia (10.8), Pakistan (5.2), Sudan (2.3), Ethiopia (1.3)	79.5	1
							France	16.7	UK (49.6), Ireland (27.9), Spain (20.7), Portugal (1), Netherlands (0.4)	-	-
							Iran	13.1	Australia (32), Georgia (24.2), Russia (14.1), Armenia (13.9), Kazakhstan (6.4)	-	-
							Jordan	12.3	Australia (76.6), Romania (22.6), Bulgaria (0.6), Spain (0.1), South Africa (0)	0	10
							Saudi Arabia	11.4	Ethiopia (40.1), India (28.8), Australia (13.9), Pakistan (7.8), Sudan (6.9)	28.8	2

		020441	Frozen sheep carcases and half-carcases (excluding lambs)	1.1	Saudi Arabia (54.9), UAE(37.9), Maldives (7.2)	212.2	China	19.4	New Zealand (97.7), Australia (2.2), Chile (0.1)	-	-
							Malaysia	17.8	New Zealand (70.6), Australia (29.4)	-	-
							USA	12.7	Australia (77.4), New Zealand (21.7), Chile (0.9)	-	-
							Saudi Arabia	11.9	Australia (61.3), New Zealand (20.8), Brazil (9.6), India (4), Spain (3)	4	4
							Singapore	9.1	Australia (96.9), New Zealand (2.4), Denmark (0.7)	-	-
		020621	Frozen edible bovine tongues	0.2	Vietnam (100)	381.7	Japan	62.2	USA(48.6), Australia (25.4), New Zealand (10), Canada (5.2), Ireland (3)	-	-
							Russia	9.3	Argentina (40.2), Brazil (30.8), Paraguay (19.3), Uruguay (6.5), Italy (1.3)	-	-
							Indonesia	8.5	Australia (80.1), New Zealand (17.8), USA(1.4), Spain (0.5), Canada (0.2)	-	-
							USA	3.2	Canada (88.6), New Zealand (6.1), Ireland (3), Netherlands (0.9), Costa Rica (0.8)	-	-
							Hong Kong, China	2.4	Brazil (71.9), USA(23.5), Spain (2.1), Australia (0.7), Croatia (0.7)	-	-
63	233.0	630260	Toilet linen and kitchen linen, of terry towelling or similar terry fabrics of cotton	212.1	USA(55.6), Australia (5.6), Germany (4.7), UK (3.3), Sweden (3)	5426.8	USA	39	India (36.4), Pakistan (25.2), China (24.5), Turkey (5.5), Bangladesh (2.6)	36.4	1
							Japan	9.9	China (57.4), Viet Nam (32.8), Bangladesh (2.3), India (2.1), Thailand (1.9)	2.1	4
							Germany	5.7	Turkey (41.4), Pakistan (15.2), India (9.1), Portugal (5.8), China (5.5)	9.1	3
							UK	4.7	Pakistan (28.8), India (25.8), Turkey (17), China (8.4), Bangladesh (6.2)	25.8	2
							France	4.1	Turkey (30.6), Portugal (18.7), Pakistan (15.2), China (10.7), India (7.3)	7.3	5
		630492	Articles for interior furnishing, of cotton	4.1	USA(36), Finland (7), UK (6.2), UAE(6), France (4.7)	698.2	USA	30.8	China (47.5), India (35), Pakistan (5), Portugal (3.4), Italy (3.2)	35	2
							Germany	9.3	China (43.7), India (28.5), Pakistan (9.3), Bangladesh (3.3), Poland (2.5)	28.5	2
							India	6.2	Viet Nam (73), China (24.5), Thailand (0.7), UK (0.3), Japan (0.2)	NA	NA
							Japan	5	China (72.2), India (23), Italy (1), Estonia (1), Spain (0.4)	23	2

							UK	4.1	China (37.3), India (32.4), Germany (11.4), Italy (3.9), Lithuania (3.6)	32.4	2
		630130	Blankets and travelling rugs of cotton	2.6	Australia (41.8), UK (20.7), Germany (11.4), USA(8.7), China (5.8)	451.5	USA	45.7	India (48.7), China (33), Pakistan (10.7), Portugal (3.8), Germany (0.9)	48.7	1
							Japan	8.2	China (82), Viet Nam (7.8), Thailand (5), India (2.2), Latvia (1.1)	2.2	4
							Germany	4.6	Poland (24.6), China (17.2), India (16.7), Portugal (9.2), Turkey (8.4)	16.7	3
							UK	3.9	China (41), India (27.4), Germany (7.6), Belgium (4.2), Portugal (4.1)	27.4	2
							Canada	3.3	China (37.7), India (30), Pakistan (14.7), Bangladesh (6.1), Portugal (4.1)	30	2
		630210	Bedlinen, knitted or crocheted	2.3	Germany (21.5), Italy (11.9), USA(10.5), Sweden (9.7), Belgium (9.3)	1184.2	USA	23.4	China (56.5), Pakistan (32.6), Turkey (3.4), India (2.7), El Salvador (2.1)	2.7	4
							Germany	23.1	Turkey (31), Pakistan (25), China (14.8), Romania (7.7), Poland (6.8)	0.4	17
							Japan	7.4	China (86), Cambodia (7.1), Viet Nam (5.4), Indonesia (0.7), Germany (0.3)	0	18
							Netherlands	7	Pakistan (46.4), Turkey (25.8), China (14.3), Germany (4.5), Egypt (4.2)	0.3	8
							Austria	4.4	Turkey (25.7), Germany (21), Pakistan (20.8), Slovakia (12), China (7.7)	0	21
		630510	Sacks and bags, for the packing of goods, of jute or other textile bast fibres of heading 5303	2.3	Saudi Arabia (86.2), Belgium (5.3), Finland (2.1), Netherlands (1.2), UK (1)	336.0	Sudan	24.5	Bangladesh (80.5), India (10), Pakistan (7), Egypt (2.3), Burundi (0.1)	10	2
							Ghana	11.3	India (98.2), Spain (1.5), China (0.2), USA(0.1)	98.2	1
							India	7.4	Nepal (65.8), Bangladesh (20.5), Thailand (9.5), Malaysia (1.9), Canada (0.7)	NA	NA
							Côte d'Ivoire	5.5	India (97.1), Bangladesh (1.4), Netherlands (1), Viet Nam (0.6), Belgium	97.1	1
							Netherlands	4.3	Bangladesh (56.4), India (31), Belgium (5.1), China (1.7), Germany (1.6)	31	2
82	181.1	820411	Hand-operated spanners and wrenches, incl. torque meter wrenches, of base metal, non-adjustable	106.6	Germany (14.8), USA(12.9), Russia (7.9), UAE(7.6), Brazil (6.2)	1328.4	USA	19	China (53), Taipei, Chinese (25.6), India (7.8), Germany (2.7), Argentina (2.5)	7.8	3
							Germany	7.7	Taipei, Chinese (30.8), China (23.4), India (14), Turkey (5.9), USA(3.8)	14	3
							France	4.9	Taipei, Chinese (39.2), China (28.9), Germany (10.4), India (5.7), Italy (3)	5.7	4

							Canada	4	USA(44.6), China (37.2), Taipei, Chinese (12), Germany (2.1), India (0.9)	0.9	5
							UK	3.6	China (23.6), Germany (23.2), Taipei, Chinese (15.4), USA(13.1), India (7.9)	7.9	5
		820559	Hand tools, incl. glaziers' diamonds, of base metal, n.e.s.	19.8	USA(35.3), UK (15.6), UAE(10.7), Mexico (5), Australia (4.9)	3108.1	USA	17.5	China (41.1), Taipei, Chinese (23.8), Mexico (7.2), India (4.6), Germany (4)	4.6	4
							Germany	7.2	China (23.5), France (11), Taipei, Chinese (10.4), USA(8.6), Austria (5.7)	0.6	18
							France	5.3	Germany (28.7), China (18.4), Taipei, Chinese (8.2), Italy (6.6), USA(6.3)	0.9	17
							UK	4.3	China (30.9), Germany (15.3), USA(14.9), Taipei, Chinese (13.5), France (5)	2.7	6
							Netherlands	3.9	Germany (26.6), Belgium (14.7), China (11.2), UK (6.8), France (6.5)	0.4	20
		820570	Vices, clamps and the like (excluding accessories for and parts of machine tools)	14.7	USA(16.2), France (14.5), Germany (5.8), Italy (5.7), UAE(5.2)	765.0	USA	22.5	China (62.4), Taipei, Chinese (9.8), Germany (6.4), Japan (4), Canada (3.4)	2.9	6
							Germany	7.5	China (23.8), Italy (13.7), Turkey (10.5), USA(6.7), Taipei, Chinese (6.7)	4	6
							Canada	7.3	China (49.4), USA(34.2), Germany (4.9), Taipei, Chinese (3.6), India (1.5)	1.5	5
							Thailand	4.2	Japan (45), China (16.7), Taipei, Chinese (13.3), Germany (5.2), USA(4)	1.7	8
							UK	3.8	China (40.1), Germany (19.2), USA(12.1), Taipei, Chinese (6.1), India (4.5)	4.5	5
		820320	Pliers, incl. cutting pliers, pincers and tweezers for non-medical use and similar hand tools	11.0	UAE(18.8), Brazil (10), USA(8.5), Thailand (7), Italy (6.7)	1404.1	USA	16.6	China (58.9), Taipei, Chinese (16.2), Germany (5.3), India (4.4), Switzerland (3.9)	4.4	4
							Germany	7.8	China (25.5), USA(13.3), Taipei, Chinese (10.4), Switzerland (9.4), Sweden (6.1)	1.4	16
							France	5.3	China (37.1), Germany (24.9), Taipei, Chinese (9), USA(7), UK (3.6)	0.6	18
							UK	4.5	China (24.3), Germany (24), USA(15.1), Taipei, Chinese (9.4), Netherlands (6.9)	2.7	7
							Netherlands	3.9	Germany (24.8), China (24.6), Sweden (13.6), USA(6.7), Belgium (5.7)	0.3	18

		820130	Mattocks, picks, hoes and rakes, with working parts of base metal (excluding ice axes)	6.4	UK (38.1), USA(16.1), France (7.5), Saudi Arabia (5.6), Mexico (4.6)	242.8	USA	25.7	China (48.9), Mexico (36.1), Taipei, Chinese (7.4), India (2.2), Viet Nam (1.2)	2.2	4
							Germany	6.2	China (32.4), Czech Republic (27.3), Poland (9.7), Viet Nam (7.1), Taipei, Chinese (5.2)	1.1	11
							France	3.8	China (39.2), Germany (15.4), India (7.2), UK (6.1), Italy (5.7)	7.2	3
							UK	3.8	China (34.1), India (22.7), Germany (16.7), France (8.6), Poland (5.5)	22.7	2
							Japan	3.2	China (85.9), Taipei, Chinese (10.1), Viet Nam (3.8), USA(0.2)	-	-
84	92.3	840890	Compression-ignition internal combustion piston engine "diesel or semi-diesel engine"	14.0	Turkey (52.3), Egypt (18.5), Syria (13.2), Iraq (7.2), Iran (5.1)	11988.7	USA	20.5	Japan (36.1), UK (15.8), Mexico (10.5), Germany (10.1), Italy (6.8)	2.4	9
							China	16.6	Japan (37.8), USA(19.9), Germany (15), UK (9.6), India (6.3)	6.3	5
							UK	5.5	USA(33.3), India (16.8), France (11.3), China (10.7), Germany (9.7)	16.8	2
							Italy	4.6	France (26.9), Germany (22.6), UK (17.3), Japan (10.4), USA(6.1)	0.6	14
							Germany	4.3	USA(28.5), UK (18), Japan (17.7), France (15.6), Switzerland (9)	0.3	15
		840991	Parts suitable for use solely or principally with spark-ignition internal combustion piston	12.7	USA(54.1), Netherlands (16.9), UK (10.9), Thailand (4.2), Belgium (4.1)	32319.4	USA	20.1	Mexico (35.4), Japan (21.7), Canada (10.6), China (9.3), South Korea (6.3)	1	11
							Germany	9.2	Turkey (18.7), Poland (12.1), Austria (10.1), Czech Republic (9.9), Italy (7.9)	0.6	22
							Mexico	9	USA(62.6), Japan (9.2), Germany (6), China (4.9), South Korea (4.4)	0.6	11
							China	8.4	Germany (26.1), Japan (25.1), USA(11.9), South Korea (10.3), Italy (3.3)	0.3	25
							UK	7.4	Germany (38.7), Poland (8.4), France (7.4), Japan (6.6), Czech Republic (6.5)	0.8	20
		840999	Parts suitable for use solely or principally with compression-ignition internal combustion	12.1	Poland (23), Egypt (16.3), Turkey (15), Germany (10.1), Iraq (8.5)	32108.7	Germany	11.5	Turkey (19.5), Poland (13), France (7.7), Austria (5.7), Czech Republic (5.3)	1.7	16
							USA	8.9	Mexico (18.4), China (15.1), Germany (15), Brazil (11.4), Canada (6.3)	5.8	6
							France	6.8	Germany (34.3), Italy (8.7), Sweden (6.2), Spain (6), Poland (4.8)	3.5	7
							UK	4.9	Germany (26.9), USA(12.2), Japan (10.6), Brazil (5.5), China (5.3)	4.9	7
							Italy	4.6	Germany (38.3), China (7.3), Turkey (5.4), Poland (5.2), Brazil (4.8)	3.1	9

		843290	Parts of agricultural, horticultural or forestry machinery for soil preparation or cultivation	11.6	USA(34.1), Tanzania (9.7), Kenya (9), Spain (5.1), Sri Lanka Dsr (4)	2673.8	Germany	10.8	Italy (16.8), France (14.6), Czech Republic (11.1), Netherlands (8.3), Hungary (7.4)	1.5	14
							USA	10.6	Canada (31.8), China (21.4), Mexico (12.4), Italy (5.8), France (3.9)	3.9	6
							France	9.9	Germany (42.5), Italy (20.5), Poland (6.1), Belgium (3.9), Spain (3.8)	1.1	15
							Canada	6.1	USA(64.6), China (9.4), France (6.2), Canada (2.9), Germany (2.5)	0.1	25
							Russia	5.6	Germany (44.8), USA(12.3), Italy (6.3), Canada (5.8), Spain (4.8)	0.8	15
		845210	Sewing machines of the household type	10.8	Afghanistan (23.1), Myanmar (15.8), Pakistan(14), Bangladesh (7.8), Iraq (7.2)	1209.4	USA	21.9	China (33.3), Viet Nam (28.7), Taipei, Chinese (16.4), Thailand (15.6), Japan (3.7)	0	34
							Germany	13.9	Viet Nam (41.5), China (22.7), Taipei, Chinese (21.8), Thailand (6.2), Japan (4)	0	37
							Japan	6.3	China (36.6), Taipei, Chinese (31.1), Viet Nam (27.3), Thailand (5), ()	0	6
							Netherlands	4.1	Belgium (31.1), Austria (19.6), China (18.7), Germany (9.3), Taipei, Chinese (9.1)	0	41
							Russia	3.5	Viet Nam (27.6), Taipei, Chinese (26.8), Thailand (25.1), China (20), Belarus (0.4)	-	-
40	78.4	401150	New pneumatic tyres, of rubber, of a kind used for bicycles	33.3	Germany (24.1), Mali (7.8), Cote D' Ivoire (7.1), Burkina Faso (5.6), Mexico (5.2)	776.3	Germany	12.7	Indonesia (37.6), Viet Nam (18.8), China (17.9), India (9.5), Taipei, Chinese (5.2)	9.5	4
							USA	8.6	Taipei, Chinese (30.5), China (21), Germany (20.8), Thailand (12.9), Indonesia (5.3)	2.2	8
							Netherlands	6.4	Germany (25), China (15.1), Indonesia (13.7), Viet Nam (10.8), Italy (8.9)	2.4	9
							Italy	5.7	Thailand (32.1), Germany (18.9), France (13.6), China (13.5), Viet Nam (4.5)	0.9	12
							UK	4.9	Germany (26.3), Italy (14.6), Netherlands (14.6), France (9.1), Taipei, Chinese (6.4)	2.2	10
		400921	Tubes, pipes and hoses, of vulcanised rubber	14.2	Belgium (29.5), South Korea (18.6), Australia (14.5),	1542.1	Germany	14.5	Turkey (18.8), Italy (15.3), Czech Republic (14.2), Poland (14.1), Austria (14.1)	1.9	9

			(excluding hard rubber), reinforced or otherwise only with metal, without fittings		USA(12.8), Brazil (6.6)		USA	12.6	Italy (17.2), Mexico (15.7), China (14.4), Turkey (13.4), Thailand (9)	4.4	8
							Canada	5.6	USA(54.7), Italy (10.6), China (8), Mexico (5.2), Turkey (4.1)	2.2	9
							China	4.7	Singapore (16.4), Italy (15.2), USA(12.4), South Korea (12), Turkey (9.6)	3.7	8
							Italy	4.7	Turkey (14.7), Romania (10.5), Austria (9.6), Macedonia, The Former Yugoslav Republic of (8.7), Germany (8.1)	3.3	10
		400300	Reclaimed rubber in primary forms or in plates, sheets or strip	10.6	China (24.7), Pakistan(22.1), Thailand (13.2), Brazil (9.9), Sri Lanka Dsr (9.5)	328.3	China	17.8	India (31.3), Thailand (21.1), Malaysia (9.6), Indonesia (7.2), USA(6.3)	31.3	1
							USA	16.4	Canada (54.7), India (21.7), China (14.1), Netherlands (5.6), Belgium (1.5)	21.7	2
							Netherlands	5.6	Germany (33.3), Belgium (23.9), Slovakia (8.5), Poland (6), Italy (4.6)	1.1	14
							South Korea	4	China (46), Malaysia (25.3), Indonesia (8.3), Netherlands (7.7), India (5.5)	5.5	5
							Thailand	3.5	India (50.6), China (30.3), Taipei, Chinese (5.3), USA(4.9), South Korea (3.8)	50.6	1
		400932	Tubes, pipes and hoses, of vulcanised rubber (excluding hard rubber), reinforced or otherwise combined only with textile materials, with fittings	6.1	USA(88.6), UK (5.6), Canada (3.6), Germany (1), Spain (0.3)	1473.4	USA	28.9	Mexico (59.3), China (16.1), South Korea (4), Germany (4), Japan (3.1)	1.9	7
							Germany	12.2	Hungary (21.9), Poland (19.1), Czech Republic (12.7), Bulgaria (11.3), Romania (10.2)	0.1	25
							Mexico	8.7	Viet Nam (53.3), USA(28.1), China (3.3), Romania (2.6), South Korea (2.2)	0.3	17
							Canada	7.2	USA(58.6), Mexico (22.4), China (9.5), Japan (2.3), France (1.5)	0	21
							China	6.4	Germany (39.9), Czech Republic (11.5), Hungary (10.3), Poland (7.2), South Korea (6.7)	0	29

		401693	Gaskets, washers and other seals, of vulcanised rubber	4.9	Germany (61.1), China (9), Italy (7.5), Norway (5.4), UK (4.2)	13300.8	USA	14.8	Mexico (22.6), China (14.5), Japan (14), Taipei, Chinese (8.8), Canada (8.3)	0.8	14
							Germany	10.7	Italy (17.9), Czech Republic (13.4), Poland (11.8), France (10.9), USA(4.3)	0.6	26
							China	10.1	Japan (21.2), Germany (17.6), USA(13.4), South Korea (6.6), Italy (5.7)	0.4	24
							Mexico	6.8	USA(51.2), South Korea (10.6), China (9.7), Japan (5.7), Germany (4)	0.2	20
							Canada	3.9	USA(59.4), Mexico (10.3), China (7.5), Germany (3.2), Japan (3)	0.4	17

Annexure 2

List of Major Underachievers

HS 2 digit	Major HS 6 digit	HS description	Exports from Punjab in 2017 (US$ Million)
84	848180	Appliances for pipes, boiler shells, tanks, vats or the like	5.9
	847990	Parts of machines and mechanical appliances, n.e.s.	5.3
	840820	Compression-ignition internal combustion piston engine "diesel or semi-diesel engine"	4.0
	848190	Parts of valves and similar articles for pipes, boiler shells, tanks, vats or the like, n.e.s.	2.6
	848310	Transmission shafts, incl. cam shafts and crank shafts, and cranks	2.5
30	300490	Medicaments consisting of mixed or unmixed products for therapeutic or prophylactic purposes	34.3
	300640	Dental cements and other dental fillings; bone reconstruction cements	0.4
	300432	Medicaments containing corticosteroid hormones, their derivatives or structural analogues	0.4
	300590	Wadding, gauze, bandages and the like, e.g. dressings, adhesive plasters, poultices	0.3
	300439	Medicaments containing hormones or steroids used as hormones but not antibiotics	0.2
87	870870	Road wheels and parts and accessories thereof, for tractors, motor vehicles	6.2
	870850	Drive-axles with differential, whether or not provided with other transmission components	6.1
	870422	Motor vehicles for the transport of goods, with compression-ignition internal combustion piston	3.6
	870840	Gear boxes and parts thereof, for tractors, motor vehicles for the transport of ten or more persons	3.1
	870120	Road tractors for semi-trailers	2.0
85	851220	Electrical lighting or visual signalling equipment for motor vehicles	3.8
	850720	Lead acid accumulators (excluding spent and starter batteries)	2.1
	853710	Boards, cabinets and similar combinations of apparatus for electric control or the distribution	1.9
	850300	Parts suitable for use solely or principally with electric motors and generators	1.5
	854129	Transistors with a dissipation rate >= 1 W (excluding photosensitive transistors)	1.3
39	392690	Articles of plastics and articles of other materials of heading 3901 to 3914, n.e.s	9.3
	392190	Plates, sheets, film, foil and strip, of plastics, reinforced, laminated	1.1
	392010	Plates, sheets, film, foil and strip, of non-cellular polymers of ethylene, not reinforced	0.9
	390740	Polycarbonates, in primary forms	0.6
	392321	Sacks and bags, incl. cones, of polymers of ethylene	0.4
62	620342	Men's or boys' trousers, bib and brace overalls, breeches and shorts, of cotton	3.7
	620443	Women's or girls' dresses of synthetic fibres	2.1
	620343	Men's or boys' trousers, bib and brace overalls, breeches and shorts of synthetic fibres	1.4
	620640	Women's or girls' blouses, shirts and shirt-blouses of man-made fibres	1.2
	620322	Men's or boys' ensembles of cotton (excluding knitted or crocheted, ski ensembles and swimwear)	0.5
21	210690	Food preparations, n.e.s.	9.4
	210390	Preparations for sauces and prepared sauces; mixed condiments and seasonings	0.5
	210120	Extracts, essences and concentrates, of tea or mate, and preparations	0.2
	210111	Extracts, essences and concentrates, of coffee	0.2
	210320	Tomato ketchup and other tomato sauces	0.1

94	940190	Parts of seats, n.e.s.	3.0
	940490	Articles of bedding and similar furnishing, fitted with springs or stuffed or internally filled	1.1
	940360	Wooden furniture (excluding for offices, kitchens and bedrooms, and seats)	0.7
	940390	Parts of furniture, n.e.s. (excluding of seats and medical, surgical, dental)	0.6
	940290	Operating tables, examination tables, and other medical, dental, surgical or veterinary furniture	0.4
90	902110	Orthopaedic or fracture appliances	2.4
	902290	X-ray generators other than X-ray tubes, high tension generators, control panels and desks	0.5
	901890	Instruments and appliances used in medical, surgical or veterinary sciences, n.e.s.	0.5
	901849	Instruments and appliances used in dental sciences, n.e.s.	0.4
	903289	Regulating or controlling instruments and apparatus	0.2
02	020130	Fresh or chilled bovine meat, boneless	4.5

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