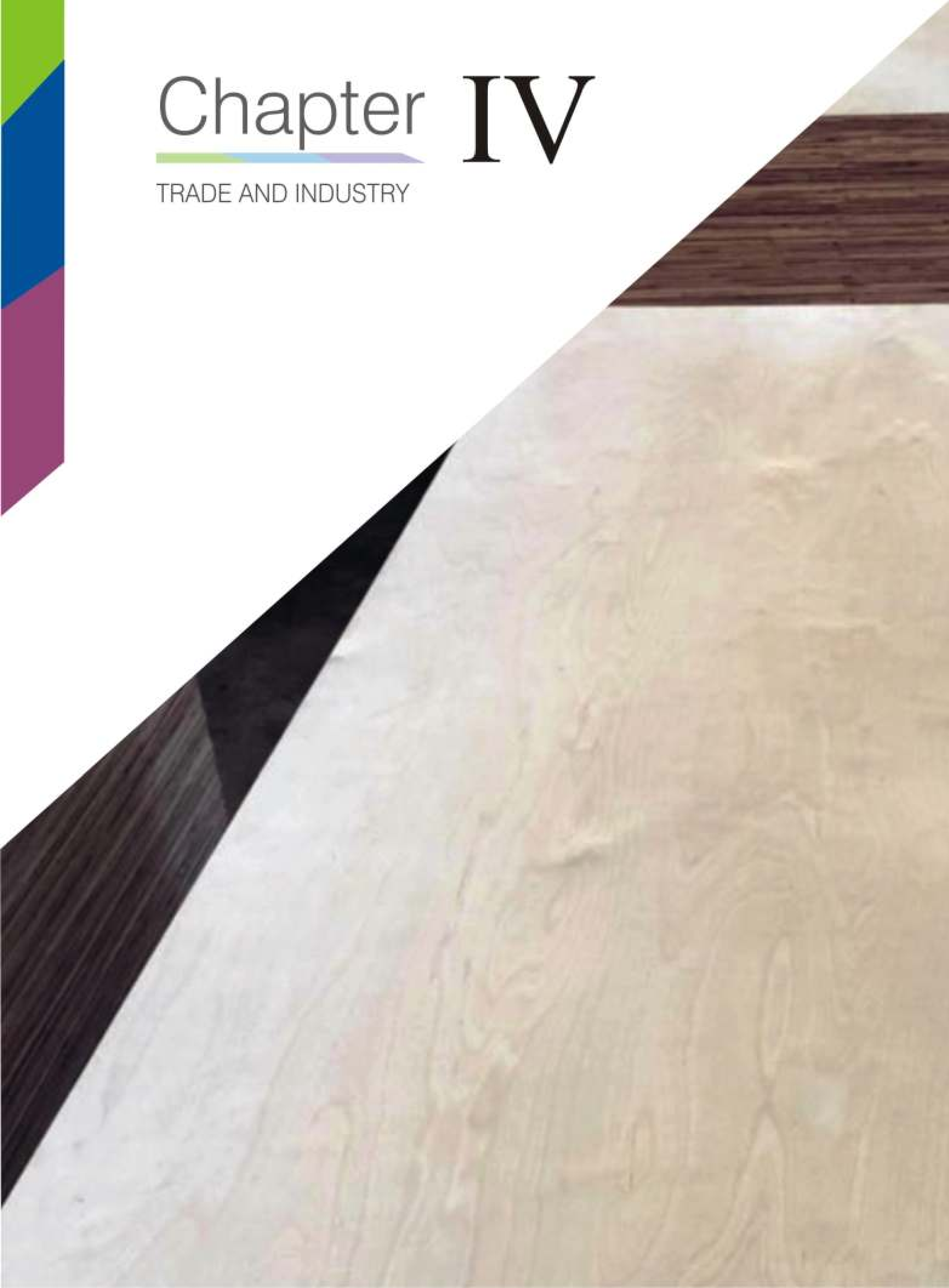
Chapter IV

TRADE AND INDUSTRY



TRADE AND INDUSTRY

The economic activities considered for estimation of contribution of any economic sector to the economy of the country are given in detail in the National Industrial Classification (NIC). This follows the International Standards of Industrial Classification (ISIC). Forestry forms a subgroup of Section A relating to agriculture, forestry and fishing and comes under Division 02 of Forestry and logging (Table 4.1.).

Table 4.1. Detailed industrial structure in respect of forestry and logging sector according to the NIC

SECTION A	Agriculture, forestry and fishing
DIVISION 02	Forestry and logging
GROUP 021	**Silviculture and other forestry activities**
Class 2010	Silviculture and other forestry activities Exclusions: Growing of Christmas trees; operation of tree nurseries; gathering of wild growing NWFPs and production of wood chips and articles
Sub-class 02101	Growing of standing timber (planting, replanting, transplanting, thinning and conserving of forests and timber tracts)
Sub-class 02102	Operation of forest tree nurseries
Sub-class 02109	Other forestry activities including growing of pulpwood, firewood, etc.
GROUP 022	**Logging**
Class 0220	Logging Exclusions: Growing of Christmas trees; growing of standing timber: planting, replanting, transplanting, thinning and conserving of forests and timber tracts; gathering of wild growing NWFPs production of wood chips and particles; production of charcoal through distillation of wood.
Sub-class 02201	Gathering and preparation of firewood
Sub-class 02202	Logging camps and loggers primarily engaged in felling timber and producing wood in the rough such as pitprops, split poles, pickets, hewn
Sub-class 02203	railway ties
Sub-class 02209	Production of charcoal in the forest (using traditional methods) Other logging activities

IV

GROUP 023	**Gathering of NWFPs**
Class 0230	Gathering of NWFPs Exclusions: Managed production of any of these products (except growing of cork trees); growing of mushrooms or truffles; growing of berries and nuts; gathering of firewood; production of wood chips
Sub-class 02301	Gathering of tendu leaves
Sub-class 02302	Gathering of lac, resins and rubber like gums
Sub-class 02303	Gathering of wild growing mushrooms, truffles, berries, nuts, cork, balsams, vegetable hair, eelgrass. Mosses, lichens
Sub-class 02309	Gathering of NWFPs
GROUP 024	**Support services to forestry**
Group 0240	Support services to forestry Exclusions: operation of forest tree nurseries
Sub-class 02401	Forestry service activities (forest management consulting services, forestry inventories, timber evaluation, forest pest control)
Sub-class 02402	Logging service activities such as transport of logs within the forest

Apart from this, forest based industry, except furniture manufacture, is covered under Division 16 of NIC. Besides, the forest-based industry in the manufacturing sector (Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials) is covered under Division 16 of Group 162 of NIC 2008. Manufacture of furniture is covered under another division of NIC. The detailed structure is given in Table 4.2.

Table 4.2. Detailed industrial structure in respect of wood based industry

GROUP 161	**Saw milling and planing of wood**
Class 1610	Saw milling and planing of wood Exclusions: Logging and production of wood; manufacture of veneer sheets thin enough for use in plywood, boards and panels; manufacture of shingles and shakes, beadings and mouldings

Sub-class 16101	Sawing and planning of wood
Sub-class 16102	Manufacture of unassembled wooden flooring including parquet flooring
Sub-class 16103	Manufacture of wooden railway sleepers
Sub-Class 16109	Activities related to saw milling and planning of wood
GROUP 162	**Manufacture of products of wood, cork, straw and plaiting materials**
Class 1621	Manufacture of veneer sheets; manufacture of plywood, laminboard, particle board and other panels and board
Sub-class 16211	Manufacture of ply wood and veneer sheets
Sub-class 16212	Manufacture of particle board and fibre board
Sub-class 16213	Manufacture of flush doors and other boards or panels
Sub-class 16219	Manufacture of other plywood products
Class 1622	Manufacture of builders' carpentry and joinery Exclusions: Manufacture of unassembled wooden flooring; manufacture of kitchen cabinets, bookcases, wardrobes, etc.; manufacture of wooden partition, free standing, etc.
Sub-class 16221	Manufacture of structural wooden goods
Class 1623	Manufacture of wooden containers Exclusions: manufacture of luggage; manufacture of cases of plaiting material
Sub-class 16231	Manufacture of wooden boxes, barrels, vats, tubs, packing cases, etc.
Sub-class 16232	Manufacture of plywood chests
Sub-class 16233	Manufacture of market basketry, grain storage bins and similar products of bamboo or reed
Class 1629	Manufacture of other products of wood; article of cork, straw and plaiting material Exclusions: Manufacture of mats or matting of textile; luggage; wooden footwear, matches, clock cases, wooden spools and bobbins, furniture, wooden toys, brushes and brooms, etc.
Sub-class 16291	Manufacture of wooden industrial goods
Sub-class 16293	Manufacture of wooden agricultural implements
Sub-class 16294	Manufacture of articles of bamboo, cane and grass
Sub-class 16299	Manufacture of other wood products

4.1 STATUS OF INDUSTRY OF SAW MILLING AND PLANING OF WOOD

Saw mills in India are present in both, organized and unorganized sector. There are a number of sawmills in the unorganized sector. However, under Sections 2m(i) (employing around 8 to 10 people) and 2m(ii) (employing at least 20 people with no fixed limits on electricity consumed) of the Factory Act 1948, there are 1,748 registered saw mills in the country which are very less in numbers compared to the actual number of saw mills present. Most of the saw mills are either in the unorganized sector or may be set up illegally. The details as obtained from the Annual Survey of Industries conducted by National Sample Survey Office, MoSPI are given in the Table 4.1.1.

Table 4.1.1. Number of saw milling and planing units

State/UT	Number of saw milling and planing unit	Number of saw mills as reported by selected states
Andaman and Nicobar Islands	2	7
Andhra Pradesh	57	4,728
Arunachal Pradesh	31	NR
Assam	61	NR
Bihar	27	NR
Chhattisgarh	14	1,430
Dadar and Nagar Haveli	2	NR
Delhi	2	NR
Goa	NA	101
Gujarat	172	5,311
Haryana	78	NR
Himachal Pradesh	5	NR
Jammu and Kashmir	4	2,620
Jharkhand (2015-16)	362	NR
Karnataka	50	49
Kerala	291	NR
Madhya Pradesh	6	NR
Maharashtra	53	4,255
Manipur	6	NR
Meghalaya	45	NR
Nagaland	26	NR
Odisha	71	266
Puducherry	2	NR
Punjab	30	NR

State/UT	Number of saw milling and planing unit	Number of saw mills as reported by selected states
Rajasthan	23	4,737
Tamil Nadu	156	NR
Telangana	69	2,524
Tripura	1	NR
Uttar Pradesh	8	6,924
Uttarakhand	3	390
West Bengal	91	NR

Source: Annual Survey of Industries, Kolkata (based on ASI frame 2016-17); NA: No information available; NR: Not reported.

4.2 PULP, PAPER AND PAPERBOARD MANUFACTURING UNITS

There are 1,185 industries distributed in 25 states/UTs of the country. Maximum units are recorded in Tamil Nadu (191) and minimum in Tripura state (1). On an average, more than 100 industrial units are present in 5 states, namely, Tamil Nadu (191), Gujarat (157), Maharashtra (156), Telangana (106) and Uttar Pradesh (130). A critical examination of the Table 4.2.1. reveals that more than two-thirds of states/UTs (18) have less than the average of 47 industrial units.

Table 4.2.1. Manufacturing units of pulp, paper and paperboard

S. no.	State/UT	Number of units
1.	Andhra Pradesh	74
2.	Assam	8
3.	Bihar	14
4.	Chhattisgarh	18
5.	Dadra an Nagar Haveli	7
6.	Delhi	4
7.	Gujarat	157
8.	Haryana	36
9.	Himachal Pradesh	26
10.	Jammu and Kashmir	11
11.	Jharkhand	3
12.	Karnataka	36
13.	Kerala	18
14.	Madhya Pradesh	20
15.	Maharashtra	156
16.	Odisha	11
17.	Puducherry	5
18.	Punjab	57

S. no.	State/UT	Number of units
19.	Rajasthan	15
20.	Tamil Nadu	191
21.	Telangana	106
22.	Tripura	1
23.	Uttar Pradesh	130
24.	Uttarakhand	36
25.	West Bengal	45

Source: Annual Survey of Industries, Kolkata (based on ASI frame 2016-17).
Note: Table 4.2.1. excludes the manufacture of corrugated paper and paperboard, further-processed articles of paper, paperboard or pulp, coated or impregnated paper (where the coating or impregnation is the main ingredient), manufacture of abrasive paper, cork life preservers.

4.3 PLYWOOD, VENEER AND COMPOSITE WOOD

There are 2,238 manufacturing units spreading over 27 states and UTs (Table 4.3.1.). Highest number of units are present in Kerala State (517). On the other extreme, lowest number of units was registered in Manipur State (1) and Puduchery (1). Lagging far behind the Kerala State, only three states, *viz.*, Gujarat (237), Haryana (226) and Uttar Pradesh (210) have more than 200 production units. Majority of the states and UTs (20) have less than the average number of 83 industrial units.

Table 4.3.1. Manufacturing units of veneer sheets, plywood, laminboard, particle board and other panels and boards

S. no.	State/UT	Number of production units
1.	Andhra Pradesh	45
2.	Arunachal Pradesh	16
3.	Assam	11
4.	Bihar	173
5.	Chhattisgarh	43
6.	Dadar and Nagar Haveli	3
7.	Gujarat	237
8.	Haryana	226
9.	Himachal Pradesh	7
10.	Jammu and Kashmir	16
11.	Jharkhand	3
12.	Karnataka	146
13.	Kerala	517
14.	Madhya Pradesh	24

S. no.	State/UT	Number of production units
15.	Maharashtra	74
16.	Manipur	1
17.	Meghalaya	12
18.	Nagaland	26
19.	Odisha	3
20.	Puducherry	1
21.	Punjab	112
22.	Rajasthan	45
23.	Tamil Nadu	76
24.	Telangana	80
25.	Uttar Pradesh	210
26.	Uttarakhand	32
27.	West Bengal	99

Source: Annual Survey of Industries, Kolkata (based on ASI frame 2016-17).

4.4 INTERNATIONAL TRADE

The data on international trade of forest products is maintained by the Directorate General of Commercial Intelligence and Statistics (DGCIS).

4.4.1 Wood in Rough

Wood in Rough is defined as a first approximation to a measure of the forest harvest taken in a period. Though it covers all wood raw material, statistical records may omit wood chips and particles obtained from wood in the rough, which are included in a Subsequent group, where the first record of raw material input is of the chips produced (FAO, 1982).

The general trend in exports of wood in rough has consistently declined with an occasional peak in the last eight years (Table 4.4.1.1 and Fig. 4.4.1.1). The value of exports has increased suggesting a rise in the price of wood and also it may be due to the fact that the species exported may be different in different years. An in-depth analysis of the species-wise trade is necessary to point out the exact reason apart from the inflationary tendencies and value of INR against dollar. The imports have been, on the other hand, almost consistent from 2011-12 to 2015-16 and then showed a decline.

Table 4.4.1.1. Import and export of wood in rough

Year	Export		Import	
	Quantity ('000 m^3)	Value (INR Cr)	Quantity ('000 m^3)	Value (INR Cr)
2010-11	26.64	6.83	4,664.28	5,968.25
2011-12	10.34	11.89	6,167.56	9,370.82
2012-13	5.61	10.71	6,536.29	11,423.94
2013-14	8.40	24.21	6,078.67	12,156.68
2014-15	4.85	12.73	6,112.09	11,462.59
2015-16	7.19	550.69	5,622.15	9,730.35
2016-17	3.08	300.59	4,703.27	7,801.00
2017-18	5.70	275.08	4,877.55	8,314.77

Source: DGCIS, Kolkata.

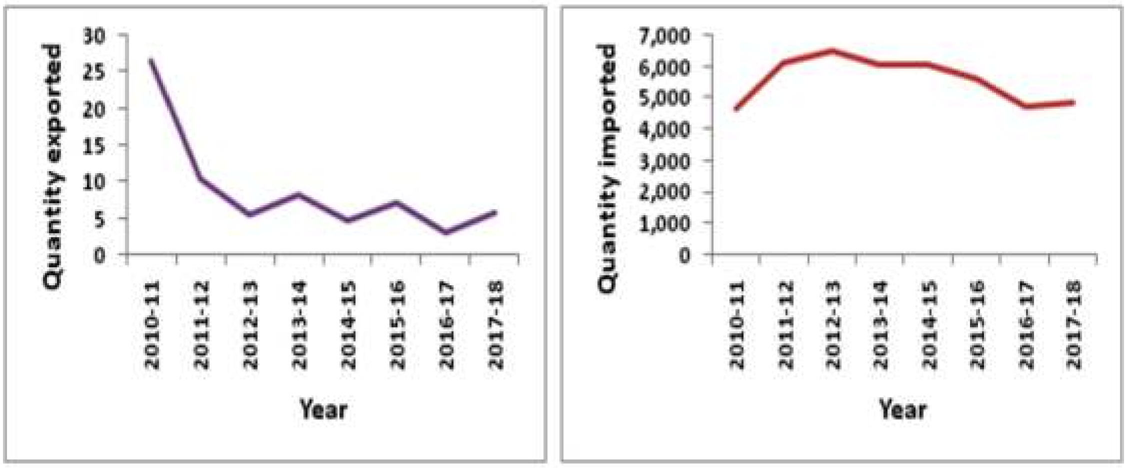


Fig. 4.4.1.1. Trends in export and import of wood in rough ('000 m^3).

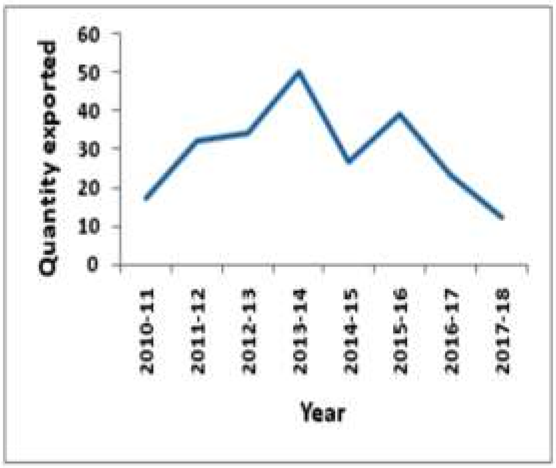
4.4.2 Sawn Wood

Sawn wood is defined as the products of the simple processes of sawing and peeling, with the associated processes of hewing, profile chipping and slicing. Table 4.4.2.1 and Fig. 4.4.2.1. revealed that export of wood and related value peaked twice in the reported period (2010-18), one, in the year 2013-14 and another, in 2015-16, otherwise, inconsistent trend. With an initial jump in the import in the year 2011-12, there was a steady increase in the import that reached the peak in the last year of reporting, i.e., 2017-18.

Table 4.4.2.1. Import and export of sawn wood

Year	Export		Import	
	Quantity ('000 m^3)	Value (INR Cr)	Quantity ('000 m^3)	Value (INR Cr)
2010-11	17.18	82.47	192.20	308.26
2011-12	32.38	100.80	495.24	696.75
2012-13	34.15	170.14	499.52	900.37
2013-14	50.26	166.17	524.81	1,070.21
2014-15	26.73	192.00	605.46	1,383.64
2015-16	39.24	164.91	764.60	1,933.05
2016-17	23.41	119.42	708.85	1,805.55
2017-18	12.19	50.42	1,044.66	2,615.15

Source: DGCIS, Kolkata.



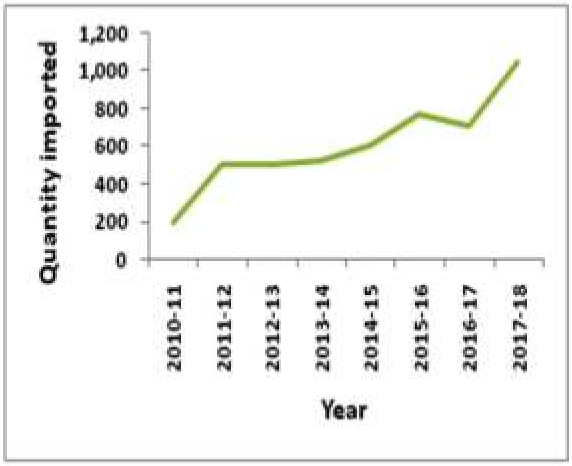


Fig. 4.4.2.1. Import and export of sawn wood ('000 m^3).

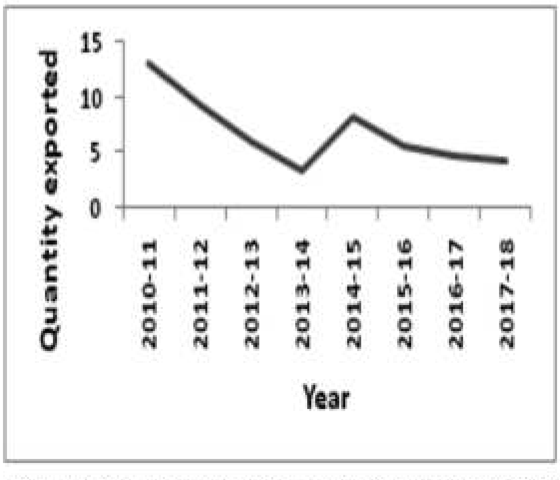
4.4.3 Veneers

The trend of the export has declined sharply in initial four years (2010-14), then, it showed a recovery for a year (2014-15) and again, had a smooth slump in the last three years of reporting (2015-18) (Table 4.4.3.1 and Fig. 4.4.3.1). On the opposite, import of veneers observed a steady rise throughout barring a slump in 2012-13.

Table 4.4.3.1. Export and import of veneers

Year	Export		Import	
	Quantity (t)	Value (INR Cr)	Quantity (t)	Value (INR Cr)
2010-11	13,173.63	71.84	27,773.42	133.54
2011-12	9,363.19	69.84	1,44,145.22	245.02
2012-13	6,072.03	86.71	90,727.52	323.60
2013-14	3,483.88	80.33	1,38,466.31	417.05
2014-15	8,404.86	94.45	2,04,406.49	714.67
2015-16	5,750.17	93.95	2,89,517.86	1,140.85
2016-17	4,803.96	103.17	3,12,186.80	1,338.16
2017-18	4,451.79	102.81	3,25,562.11	1,510.35

Source: DGCIS, Kolkata.



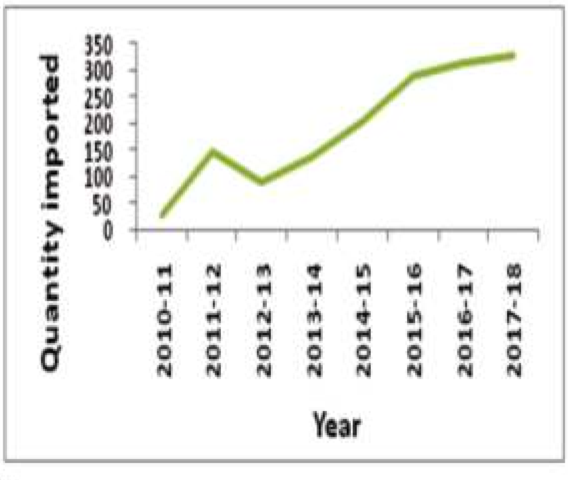


Fig. 4.4.3.1. Export and import of veneers ('000 t).

4.4.4 Plywood

The trends are quite inconsistent for the export (Table 4.4.4.1 and Fig 4.4.4.1.). The export had a slump in first three years (2010-13), then, it picked up with a steady but sharp rise in rest of the reporting period (2013-18). On the other hand, import, after an initial spurt, had a sharp fall till 2013-14 which slowed down in the last leg of four years (2014-18).

Table 4.4.4.1. Export and import of plywood

Year	Export		Import	
	Quantity (t)	Value (INR Cr)	Quantity (t)	Value (INR Cr)
2010-11	175.94	62.94	328.72	286.22
2011-12	84.12	97.59	386.42	547.77
2012-13	52.09	89.78	301.72	494.64
2013-14	131.24	146.41	186.45	469.80
2014-15	120.77	179.00	204.05	552.26
2015-16	149.22	270.73	181.54	533.97
2016-17	226.74	184.71	158.57	516.09
2017-18	231.38	212.83	230.82	718.03

Source: DGCIS, Kolkata

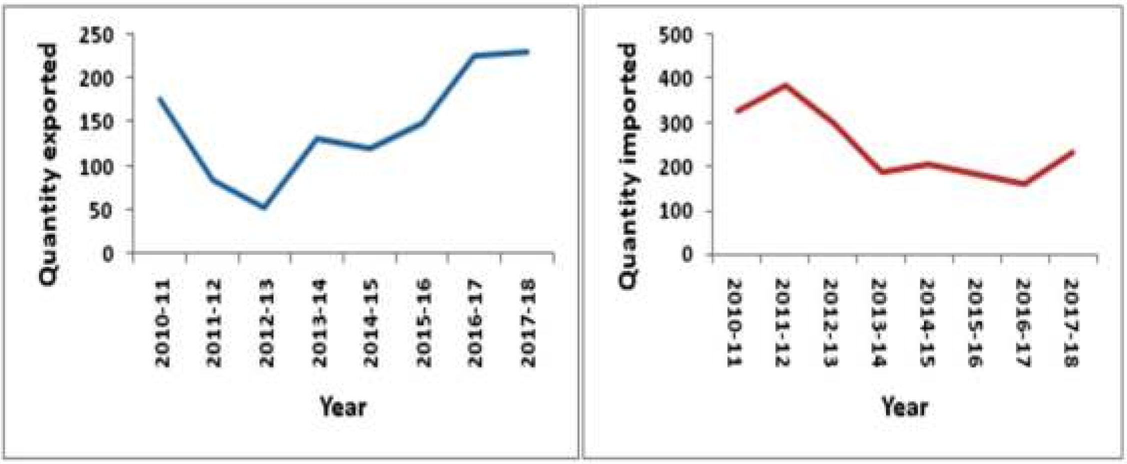


Fig. 4.4.4.1. Export and import of plywood (t).

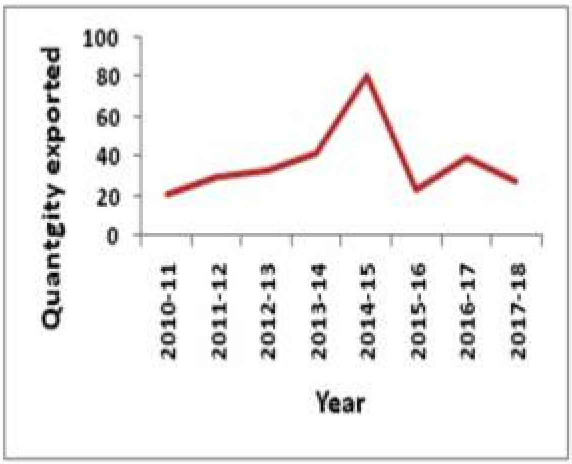
4.4.5 Wood Charcoal

The export of the wood coal showed steep rise in the initial four years (2010-14), then, a sharp fall and rise in subsequent years, i.e., 2014-15 and 2015-16, respectively (Table 4.4.5.1. and Fig. 4.4.5.1.). The modulation was gentle in following years. However, the import remained consistent for initial two years, then rose and fell very sharply in the subsequent years (2012-13 and 2013-14). Thereafter, it maintained a low profile till the last reporting year of 2017-18.

Table 4.4.5.1. Export and import of wood charcoal

Year	Export		Import	
	Quantity (t)	Value (INR Cr)	Quantity (t)	Value (INR Cr)
2010-11	20,473	37.59	2,337	1.95
2011-12	29,096	77.21	1,277	2.10
2012-13	32,995	66.66	1,09,192	2.84
2013-14	41,215	85.72	11,721	25.59
2014-15	80,817	132.53	15,313	41.89
2015-16	22,220	49.66	17,467	45.55
2016-17	39,072	87.88	2,776	3.90
2017-18	26,919	79.82	1,627	5.83

Source: DGCIS, Kolkata



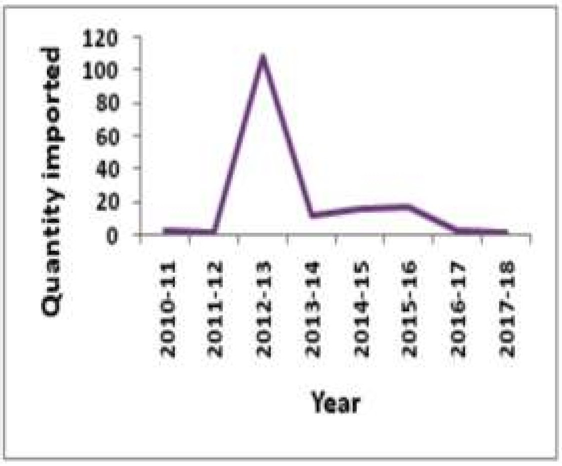


Fig. 4.4.5.1. Export and import of wood charcoal ('000 t).

4.4.6 Resins

The export of resin maintained a relatively constant profile with over the entire period of reporting except for 2011-12, in which the quantity exported had a sudden high jump (Table 4.4.6.1. and Fig. 4.4.6.1.). On the other hand, the import was consistent over the years with few marginal ups and down.

Table 4.4.6.1. Export and import of resins

Year	Export		Import	
	Quantity (t)	Value (INR Cr)	Quantity (t)	Value (INR Cr)
2010-11	568.95	16.30	12,974.52	33.25
2011-12	1,457.99	46.71	16,647.95	43.62
2012-13	257.28	13.00	16,697.90	51.99
2013-14	339.23	3.66	16,301.55	59.88
2014-15	245.00	4.26	15,908.41	61.99
2015-16	347.80	3.68	18,710.06	71.06
2016-17	177.20	2.04	16,477.45	66.28
2017-18	333.28	2.29	22,800.04	116.43

Source: DGCIS, Kolkata.

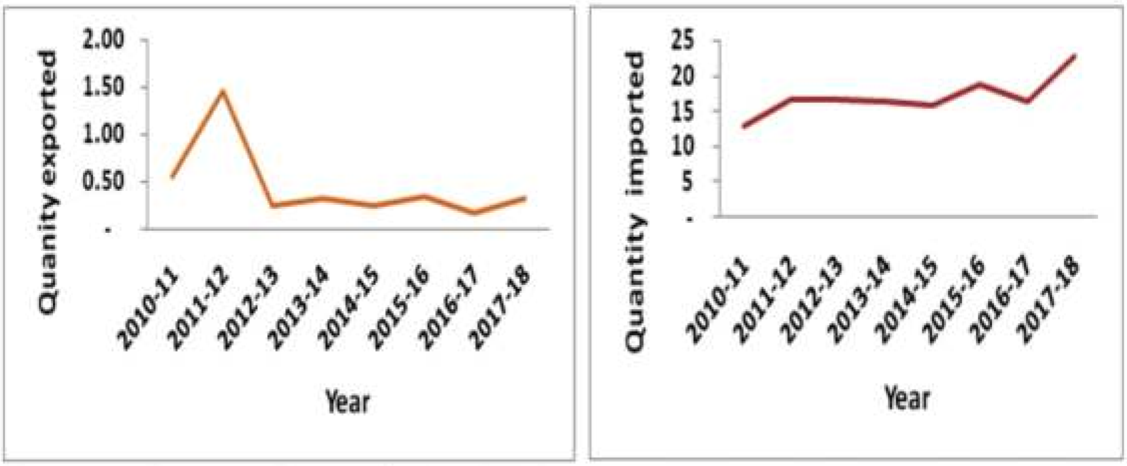


Fig. 4.4.6.1. Export and import of resins ('000 t).

4.4.7 Bamboos

Export of bamboos showed a peculiar trend, i.e., for initial seven years (2010-17), there was little change in its export and related earnings while it shot up to a unprecedented peak in the year 2017-18 (Table 4.4.7.1. and Fig. 4.4.7.1.). However, the import of the giant grass rose up to the year 2012-13 then slightly decreased continuously for the subsequent year upto 2015-16 followed by attaining a plateau.

Table 4.4.7.1. Export and import of bamboos

Year	Export		Import	
	Quantity (t)	Value (INR Cr)	Quantity (t)	Value (INR Cr)
2010-11	52.52	0.36	993.75	8.96
2011-12	124.03	0.83	1,351.60	12.85
2012-13	141.87	1.87	1,695.24	16.77
2013-14	80.29	1.78	1,209.61	12.97
2014-15	47.14	1.53	1,091.93	12.38
2015-16	73.66	3.14	979.93	11.98
2016-17	99.88	3.26	1,166.30	14.45
2017-18	1,115.99	4.34	975.15	15.70

Source: DGCIS, Kolkata.

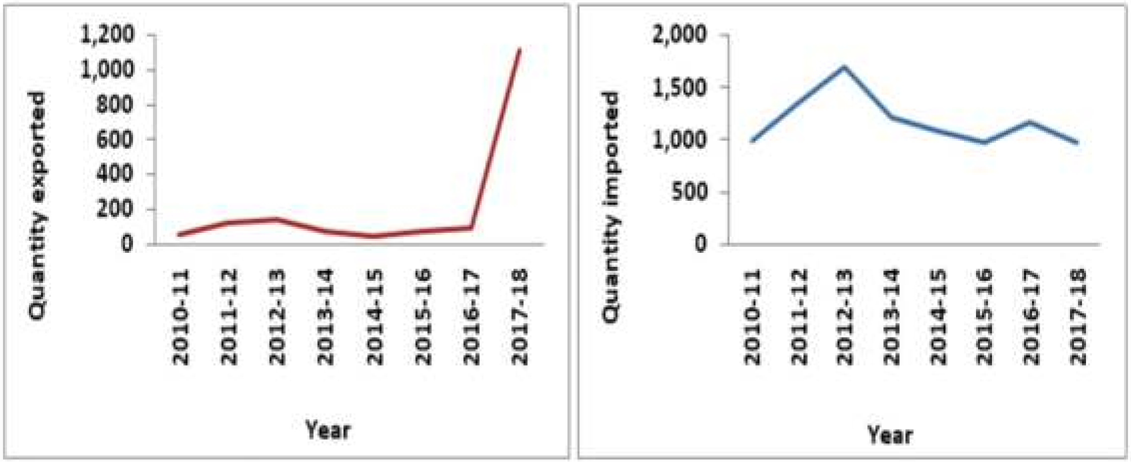


Fig. 4.4.7.1. Export and import of bamboos (t).

4.4.8 Particle Board

The export of the particle board has a zigzag trend for the first five years (2010-15) culminating into a steep rise and fall and, finally, with a moderate rise (Table 4.4.8.1. and Fig. 4.4.8.1.). The import remained on high ebb with moderate rise and fall at the beginning that turned into a consistent wave for a period of six years (2012-18).

Table 4.4.2.1. Import and export of particle board

Year	Export		Import	
	Quantity (t)	Value (INR Cr)	Quantity (t)	Value (INR Cr)
2010-11	1,499.26	7.41	1,36,347.59	275.47
2011-12	243.49	3.45	1,66,737.91	392.34
2012-13	683.21	4.41	1,16,645.43	316.27
2013-14	351.89	6.45	1,11,649.86	244.30
2014-15	919.79	14.33	1,13,189.16	192.05
2015-16	3,287.39	16.42	1,13,451.09	236.27
2016-17	1,923.88	23.64	1,23,508.19	222.50
2017-18	2,756.30	28.55	1,11,804.81	208.15

Source: DGCIS, Kolkata

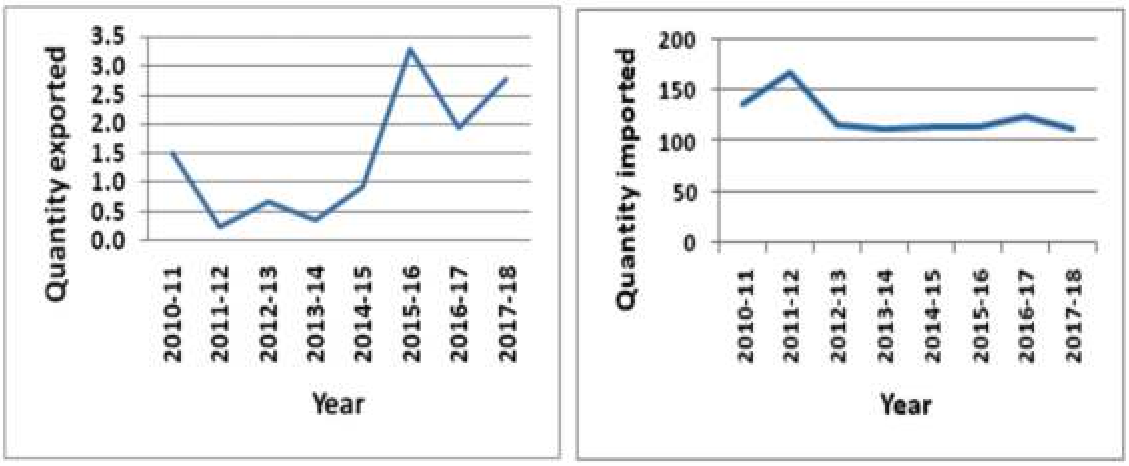


Fig. 4.4.8.1. Export and import of particle board ('000 t).