

Chapter - 5

TRADITIONAL JUTE PRODUCTS MARKET

Jute is mainly used for the purpose of packaging or wrapping of different commodities in its early stage (Ahmed, 1992). Jute was used as a finest textile fibres for the manufacturing of packaging materials at the mid of the nineteenth century as a substitute to flax in Europe particularly in Dundee, Scotland. Till late 1960's Indian jute industries produced traditional products like hessian, sacking, CBC, yarn and twine whose demand was very much higher in domestic as well as in export market. The entry of synthetics in packaging market in late 1970's as a substitute to jute with available at lower cost, reduced the demand of jute products in global markets gradually (Goyal, 1990). Due to this many mills have closed during this period. To protect the industry which provides directly or indirectly employment to 2.5 million workers and provides livelihood to 4 million farm families in India, Ministry of Textiles, GOI, introduces Jute Packaging Material Act, 1987, with objective of 100 per cent mandatory use of jute product's for packaging of foodgrains and sugar in India.

Jute manufacturing sector started to face a critical time particularly since 1990s, as jute started to face increasing competitive pressure from synthetic and other substitutes of packaging. Moreover, neighbouring countries like Bangladesh, China etc. made their jute products more competitive in international markets. Failure of Indian jute industry occurs due to not following of modern marketing strategies and international trade practices, it led to the downfall of jute products market globally. All these had adverse impact on production, consumption and export performance of jute manufacturing industry in India.

5.1 Product Portfolio and Pattern of Production

Traditionally, jute has been used to manufacture packaging materials like hessian, sacking, ropes, yarn and twine, carpet backing cloth (CBC) etc. The

specifications and standards of these classic or conventional jute products have remained unchanged for decades. Jute industry produces a number of traditional jute products. The following are the major traditional jute products produced in India:-

Hessian: Hessian is single wrap plain weave jute fabrics also called as *Burlap* in USA. It is manufactured from good quality of 'white jute' in varying weights and widths up to 500 g/m². Hessian fabrics are lighter than sacking fabrics. Hessian is used for bags and many other coarse fabric uses, such as wrappers, wall coverings, etc. Presently, shopping bags are being made out of hessian fabrics. It is also used in the upholstery and home furniture.

The following tables represents the production of Hessian jute goods in India from 2000-01 to 2012-13.

Table 5.1.1: Production of Hessian during 2000-01 to 2012-13

Quantity in '000 M.Tonnes

Year	Hessian	AGR (%)
2000-2001	337.90	--
2001-2002	275.30	-18.53
2002-2003	338.30	22.88
2003-2004	305.20	-9.78
2004-2005	310.30	1.67
2005-2006	320.00	3.13
2006-2007	250.30	-21.78
2007-2008	350.30	39.95
2008-2009	297.80	-14.99
2009-2010	206.50	-30.66
2010-2011	244.40	18.35
2011-2012	239.90	-1.84
2012-2013	210.00	-12.46
CAGR	-3.59	

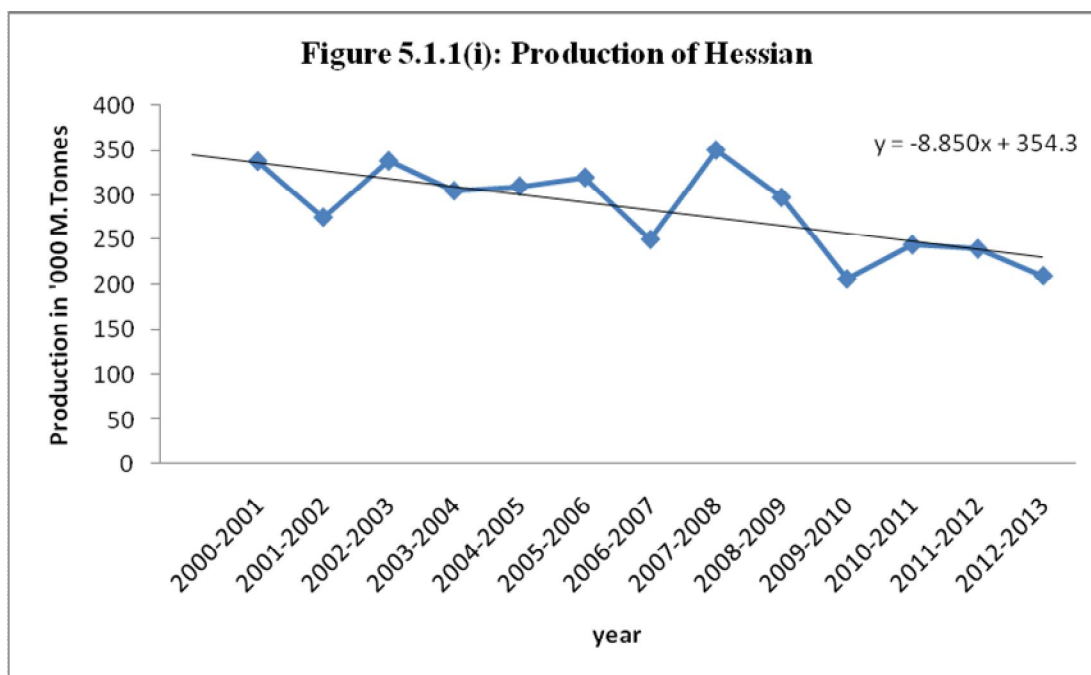
Source: National Jute Board, Annual Report, Kolkata, India, Various Issues
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues

Descriptive Statistics of Table: 5.1.1(Hessian)

Mean	283.55
SD	49.23
Maximum	350.30
Minimum	206.50

Note: Calculated.

The production of Hessian goods in India can be seen more clearly from the following graphical representation:



Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
 Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

It was evident from the above table that, production of Hessian has accounted for 337.90 Th. M.Tonnes in 2000-01 and ended with 210.00 Th. M.Tonnes in 2012-13. During the period 2000-01 to 2012-13, CAGR of Hessian goods has (-) 3.59.

Moreover, it is also observed that average production of Hessian during 2000-01 to 2012-13 has accounted for 283.55 having a SD of 49.23 (i.e., fluctuation from the average value during the period of the study). During the period, 2000-01 to 2012-13 Hessian has highest production of 350.30 and least production of 206.50.

So, therefore, it is found that production of Hessian has shown downwards trend during 2000-01 to 2012-13.

Sacking: Sacking is a range of heavy fabrics either in plain or twill weaves. Sacking refers to the coarser and heavier cloth, used primarily for sacks for packing materials that do not need special protection, but has higher weight. It is a heavier construction than hessian. In contrast to hessian, the bulk of the sacking produced is converted into bags which are used as containers for a variety of commodities like foodgrains, flour, sugar, cement, fertilizers etc.

The following tables represents the production of Sacking jute goods in India from 2000-01 to 2012-13.

Table 5.1.2: Production of Sacking during 2000-01 to 2012-13

Quantity in '000 M.Tonnes

Year	Sacking	AGR (%)
2000-2001	952.90	--
2001-2002	1034.30	8.54
2002-2003	1000.00	-3.32
2003-2004	979.30	-2.07
2004-2005	992.00	1.30
2005-2006	1007.00	1.51
2006-2007	874.70	-13.14
2007-2008	1143.00	30.67
2008-2009	1071.40	-6.26
2009-2010	921.60	-13.98
2010-2011	1076.90	16.85
2011-2012	1165.10	8.19
2012-2013	1218.20	4.56
CAGR	1.91	--

Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.

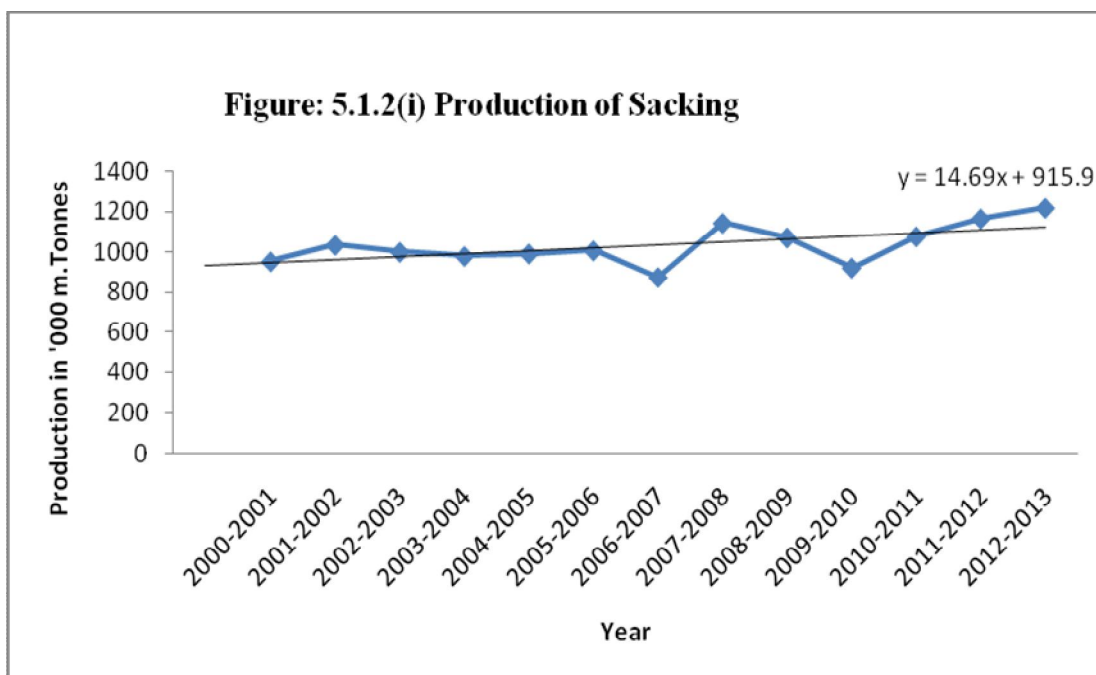
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

Descriptive Statistics of Table: 5.1.2 (Sacking)

Mean	1033.57
SD	98.94
Maximum	1218.20
Minimum	874.70

Note: Calculated.

The production of Sacking goods in India can be seen more clearly from the following graphical representation:



Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
 Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

It was palpable from the above table that, production of Sacking has accounted for 952.90 Th. M.Tonnes in 2000-01 and ended with 1218.20 Th. M.Tonnes in 2012-13. During the period 2000-01 to 2012-13 Sacking goods having a CAGR of 1.91. Though in 2006-07 (874.70 Th. M.Tonnes) and in 2009-10 (921.60 Th. M.Tonnes) production of Sacking has goes down very heavily but it has recovered and shown little upward trend since 2010-11.

Moreover, it is also observed that average production of Sacking during 2000-01 to 2012-13 has accounted for 1033.57 having a SD of 98.94 (i.e., fluctuation from the average value during the period of the study). During the period, 2000-01 to 2012-13 Hessian has highest production of 1218.20 and least production of 874.70.

Therefore, it is found that production of Sacking goods has shown some positivity during the period 2000-01 to 2012-13.

Carpet Backing Cloth: Carpet backing Cloth (CBC) is a kind of balanced fabrics, weighing between 180-407 g/m² used as a base for marking carpets. They are made of uniform yarns of particular grist. Normally, CBC is classified into the following two categories for being used in tufted carpet industry:

- a) Carpet backing (primary) - the base fabric on which pile yarns are tufted and anchored to make carpet.

- b) Carpet backing (secondary) – fabric bonded on the backside of the carpet forming an underlay.

The following tables represents the production of CBC jute goods in India from 2000-01 to 2012-13.

Table: 5.1.3 Production of CBC during 2000-01 to 2012-13

Quantity in '000 M.Tonnes

Year	CBC	AGR (%)
2000-2001	6.60	--
2001-2002	5.00	-24.24
2002-2003	5.40	8.00
2003-2004	4.70	-12.96
2004-2005	4.00	-14.89
2005-2006	6.20	55.00
2006-2007	2.90	-53.23
2007-2008	6.00	106.90
2008-2009	4.50	-25.00
2009-2010	2.40	-46.67
2010-2011	4.70	95.83
2011-2012	3.60	-23.40
2012-2013	2.90	-19.44
CAGR	-6.13	--

Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.

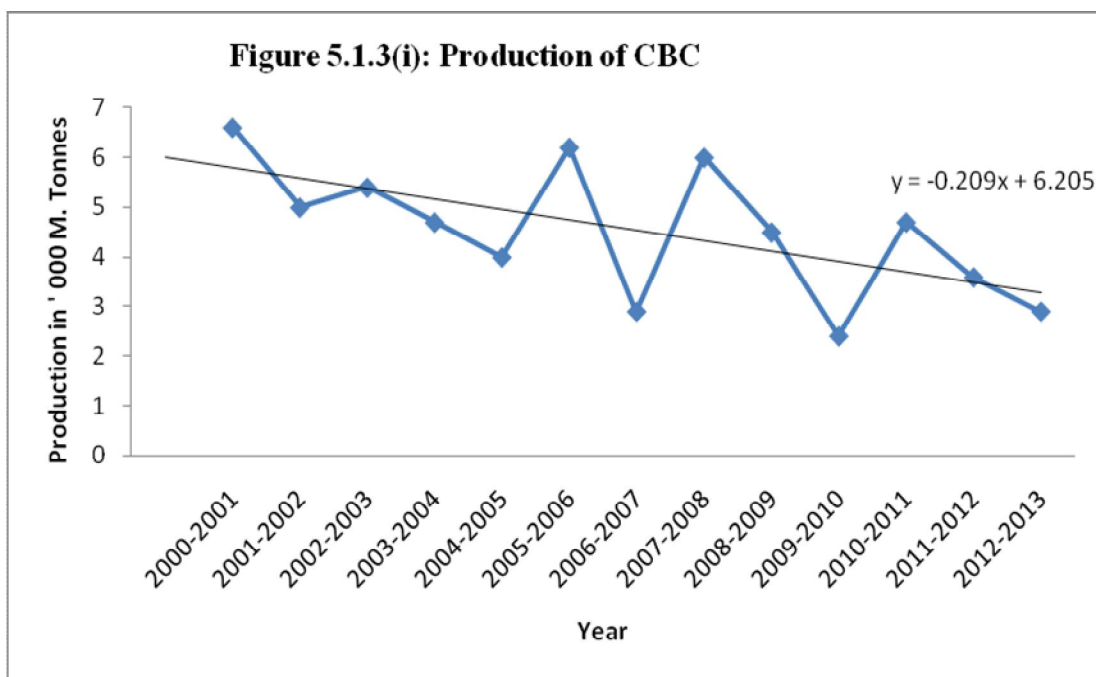
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

Descriptive Statistics of Table: 5.1.3 (CBC)

Mean	4.53
SD	1.33
Maximum	6.60
Minimum	2.40

Note: Calculated.

The production of CBC goods in India can be seen more clearly from the following graphical representation:



Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
 Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

It was evident from the above table that, production of CBC has accounted for 6.60 Th. M.Tonnes in 2000-01 and ended with 2.90 Th. M.Tonnes in 2012-13. During the period 2000-01 to 2012-13, CAGR of CBC goods has (-) 6.13. In the financial year, 2005-06, 2007-08 and 2010-11, production of CBC had shown some positivity.

Moreover, it is also observed that average production of CBC during 2000-01 to 2012-13 has accounted for 4.53 having a SD of 1.33 (i.e., fluctuation from the average value during the period of the study). During the period, 2000-01 to 2012-13 CBC has highest production of 6.60 and least production of 2.20.

So, therefore, it is found that production of CBC has shown losing trend during 2000-01 to 2012-13.

Yarn: Jute yarn is converted to have wool like appearance and feel by chemical modification, dyeing and finishing. It may be used for making sweaters, cardigans etc. it is free from health hazards and also free from hydrocarbons. It provides adequate warmth and is cheaper than wool and acrylic based products.

The following tables represents the production of Yarn jute goods in India from 2000-01 to 2012-13.

Table 5.1.4: Production of Yarn during 2000-01 to 2012-13

Quantity in '000 M. Tonnes

Year	Yarn	AGR (%)
2000-2001	212.70	--
2001-2002	183.90	-13.54
2002-2003	182.00	-1.03
2003-2004	197.70	8.63
2004-2005	212.70	7.59
2005-2006	167.30	-21.34
2006-2007	161.90	-3.23
2007-2008	188.50	16.43
2008-2009	176.20	-6.53
2009-2010	123.40	-29.97
2010-2011	177.40	43.76
2011-2012	123.40	-30.44
2012-2013	114.10	-7.54
CAGR	-4.68	--

Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.

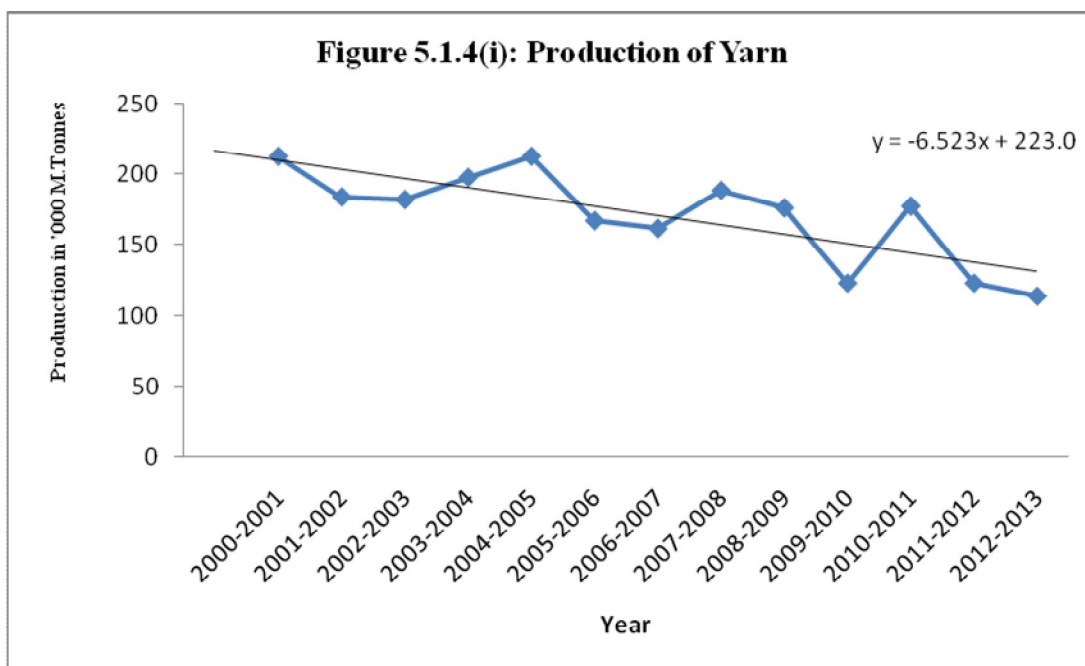
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

Descriptive Statistics of Table 5.1.4 (Yarn)

Mean	170.86
SD	32.55
Maximum	212.70
Minimum	114.10

Note: Calculated.

The production of Yarn goods in India can be seen more clearly from the following graphical representation:



Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
 Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

It was depicted from the above table that, production of Yarn has accounted for 212.70 Th. M.Tonnes in 2000-01 and ended with 114.10 Th. M.Tonnes in 2012-13. During the period 2000-01 to 2012-13, CAGR of Yarn goods has (-) 4.68. In the financial year, 2005-06, 2007-08, 2008-09 and 2010-11, production of Yarn had shown some positivity.

Moreover, it is also observed that average production of Yarn during 2000-01 to 2012-13 has accounted for 170.86 having a SD of 32.55 (i.e., fluctuation from the average value during the period of the study). During the period, 2000-01 to 2012-13 Yarn has highest production of 212.70 and least production of 114.10.

So, therefore, it is found that production of Yarn has shown downwards trend during 2000-01 to 2012-13.

Canvas and Tarpaulin (C&T): Canvas is the finest jute product, closely woven with best grades of fibre. Jute canvas is widely used in India for protection from weather. Canvas lamination with paper polythene is used in mines. Tarpaulin is used mainly for coverings on a multidimensional scale.

Webbing: Webbing is a strong, closely woven fabric used for making items such as straps and belts, and for supporting the seats of upholstered chairs.

Felt: Jute felt is a fabric of matted, compressed jute fibres, sometimes mixed with vegetables or synthetic fibres. Jute felt is being increasingly used as an industrial good, especially for insulation and acoustic.

Soil Saver: Jute soil saver is a widely applicable in erosion control on slopes of roadways and railways embankments. Jute soil savers are useful when climatic conditions are favourable for growth of vegetation. They are cheap and degrade fast. These products have excellent adaptability and absorb moisture up to 5 times their own weight. These jute soil savers are available in different shapes and size as per requirement.

Scrim Cloth: Scrim cloth is an extremely light weight Hessian cloth. It is used in the felt industry to reinforce the non-woven fabric. It is also used for strengthening paper with lamination.

Special Hessian: A special hessian with high brightness index and cleanliness and of good texture. It is used to make bags, cloths etc.

The following table represents the production of traditional jute goods other than major traditional jute goods produced in India from 2000-01 to 2012-13.

Table 5.1.5: Production of Traditional Jute Goods other than Hessian, Sacking, CBC and Yarn during 2000-01 to 2012-13

Quantity in '000 M. Tonnes

Year	C&T	AGR (%)	Webbing	AGR (%)	Felt	AGR (%)	Soil Saver	AGR (%)	Scrim Cloth	AGR (%)	Special Hessian	AGR (%)
2000-2001	60.15	--	0.58	--	0.44	--	5.95	--	4.42	--	5.73	--
2001-2002	49.40	-17.87	0.71	22.07	0.27	-38.60	4.89	-17.79	4.89	10.60	4.64	-19.09
2002-2003	54.82	10.98	0.56	-20.90	0.54	99.26	10.02	104.80	3.97	-18.92	2.90	-37.51
2003-2004	51.37	-6.30	0.29	-47.50	0.68	25.65	7.16	-28.53	1.89	-52.31	4.22	45.50
2004-2005	58.42	13.71	0.31	5.10	0.79	16.30	5.66	-21.04	3.15	66.70	4.49	6.43
2005-2006	51.10	-12.53	0.36	16.83	0.95	20.20	2.91	-48.51	1.31	-58.53	5.22	16.27
2006-2007	44.58	-12.77	0.55	52.35	0.74	-22.58	5.09	74.79	1.69	29.36	4.47	-14.38
2007-2008	52.10	16.89	0.61	11.09	0.72	-2.44	7.25	42.38	2.53	49.70	4.50	0.83
2008-2009	55.78	7.05	0.34	-44.68	0.80	11.13	2.81	-61.27	1.80	-28.86	3.77	-16.21
2009-2010	45.10	-19.15	0.27	-20.12	0.65	-19.02	2.44	-13.07	1.74	-3.66	3.00	-20.59
2010-2011	40.18	-10.91	0.21	-23.33	0.92	42.50	8.94	266.39	3.22	85.60	3.15	5.27
2011-2012	35.42	-11.83	0.40	94.20	0.80	-13.12	1.09	-87.83	2.20	-31.78	2.07	-34.53
2012-2013	29.78	-15.94	0.39	-3.48	0.74	-7.37	1.56	43.01	3.20	45.45	1.88	-8.91
CAGR	-5.26	--	-3.05	--	4.05	--	-9.81	--	-2.47	--	-8.21	--

Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.

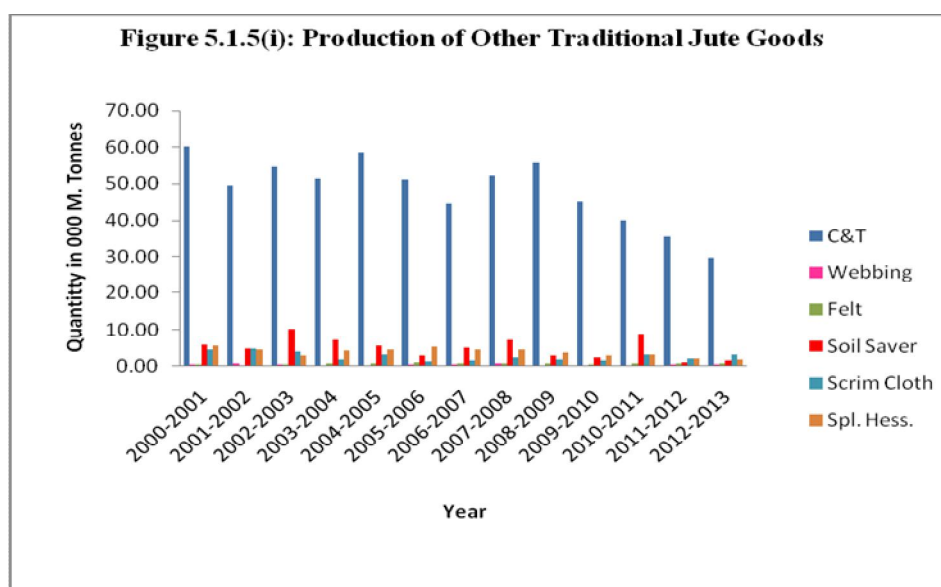
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

Descriptive Statistics of Table 5.1.5 (C&T, Webbing, Felt, Soil Saver, Scrim Cloth, Special Hessian)

Mean	48.32	0.43	0.70	5.06	2.77	3.85
SD	9.01	0.15	0.19	2.81	1.14	1.17
Maximum	60.15	0.71	0.95	10.02	4.89	5.73
Minimum	29.78	0.21	0.27	1.09	1.31	1.88

Note: Calculated.

The productions of other traditional jute goods in India can be seen more clearly from the following graphical representation:



Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

It may be seen from the above Table 5.1.5 that in the financial year 2000-01, production of C&T was 60.15 Th. M. Tonnes; production of Soil Saver was 5.95 Th. M. Tonnes, Felt produced in less quantity with 4.44 Th. M. Tonnes, Webbing was produced 0.58 Th. M. Tonnes, Scrim Cloth and Special Hessian was accounted for 4.42 and 5.73 Th. M. Tonnes respectively. Since then there was many ups and downs in production jute goods during the study period. Indeed it has found that though Felt produced in lesser quantity during the study period but the product has shown positive growth rate during the period other than this all the products has negative growth during the period.

Besides all this, it is observed that CAGR of traditional jute goods other than major traditional jute goods produced in India during the period 2000-01 to 2012-13 are C&T (-) 5.26 percent, Webbing (-) 3.05 percent, Felt 4.05 percent, Soil Saver (-)

9.81 percent, Scrim Cloth 2.47 percent Special Hessian 8.21 percent respectively. Average production of other traditional jute goods in India was C&T 48.32 Th. M.Tonnes, Webbing 0.43 Th. M.Tonnes, Felt 0.70 Th. M.Tonnes, Soil Saver 5.06 Th. M.Tonnes, Scrim Cloth 2.77 and Special Hessian 3.85 respectively during the study period; having S.D. of 9.01, 0.15, 0.19, 2.81, 1.14 and 1.17 Th. M.Tonnes respectively (i.e., fluctuation from the average value during the period of the study). During the period 2000-01 to 2012-13 C&T has accounted for highest production of 60.15 and lowest production of 29.78, similarly, Webbing has a highest production of 0.71 and lowest of 0.21, Felt has highest production of 0.95 and least of 0.27, Soil Saver has highest production of 10.2 and least of 1.09, Scrim Cloth highest production of 4.89 and lowest of 1.31 and Special Hessian highest of 5.73 and lowest of 1.88 Th. M. Tonnes respectively.

Therefore it is found that the production of traditional jute goods other than Hessian, Sacking, CBC and Yarn in India has shown a declining trend during the study period 2000-01 to 2012-13. Though in production of Felt goods has shown some amount of positive growth during the period 2000-01 to 2012-13.

The following table represents the proportion of Traditional jute goods over total production of Traditional jute goods produced in India from 2000-01 to 2012-13.

Table 5.1.6: Proportion of Hessian, Sacking, CBC, Yarn and Other Traditional jute goods to total production of Traditional Jute Goods in (%) during 2000-01 to 2012-13

Year	Hessian	Sacking	CBC	Yarn	Others	Total
2000-2001	21.29	60.03	0.42	13.4	4.87	100
2001-2002	17.61	66.16	0.32	11.76	4.15	100
2002-2003	21.16	62.56	0.34	11.39	4.55	100
2003-2004	19.66	63.08	0.3	12.73	4.23	100
2004-2005	19.49	62.32	0.25	13.36	4.57	100
2005-2006	20.48	64.45	0.4	10.71	3.96	100
2006-2007	18.58	64.94	0.22	12.02	4.24	100
2007-2008	19.95	65.11	0.34	10.74	3.86	100
2008-2009	18.44	66.33	0.28	10.91	4.04	100
2009-2010	15.8	70.51	0.18	9.44	4.07	100
2010-2011	15.67	69.03	0.3	11.37	3.63	100
2011-2012	15.24	74.02	0.23	7.84	2.67	100
2012-2013	13.27	76.97	0.18	7.21	2.37	100

Note: Calculated Value

As it may be seen from the above Table, in 2000-01, out of total production of traditional jute goods, about 60.03 % of jute goods was Sacking while Hessian, CBC,

Yarn and Other Traditional jute goods accounted for only 21.29 %, 0.42 %, 13.40 % and 4.87 % respectively, and ended with Sacking accounted 76.97 %, Hessian 13.27 %, CBC 0.18 %, Yarn 7.21 % and Other traditional goods accounted with 2.37 % in 2012-13 of total production of traditional jute goods.

It has found that the proportion of Hessian, CBC, Yarn and Other products had shown declining over time. As sacking goods had shown positive growth during 2000-01 to 2012-13.

5.2 Domestic Consumption of Traditional Jute Products

Domestic market has expanded gradually since independence. The consumption of traditional jute products has increased over export since the last few decades. Out of India's total production of 1392.40 Th. M. Tonnes in 1980-81, the quantity of goods sold in domestic market was 824.3 Th. M. Tonnes (59.19 per cent) of total production. In 1990-91, 86 per cent of jute goods consumed in India out of total production. By 2012-13, total production was 1591.30 Th. M. Tonnes out of this 1398.70 Th. M. Tonnes (87.88 per cent) was consumed in domestic market. It has been clear that since last two decades domestic consumption of jute goods has increased.

The following table represents the domestic consumption of major traditional jute goods in India during 2000-01 to 2012-13.

Table 5.2.1: Consumption of Hessian during 2000-01 to 2012-13

Quantity in '000 M. Tonnes

Year	Hessian	AGR (%)
2000-2001	269.70	--
2001-2002	243.00	-9.90
2002-2003	251.30	3.42
2003-2004	253.30	0.80
2004-2005	244.80	-3.36
2005-2006	237.60	-2.94
2006-2007	209.10	-11.99
2007-2008	271.40	29.79
2008-2009	249.80	-7.96
2009-2010	182.60	-26.90
2010-2011	182.30	-0.16
2011-2012	184.20	1.04
2012-2013	165.80	-9.99
CAGR	-3.67	--

Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.

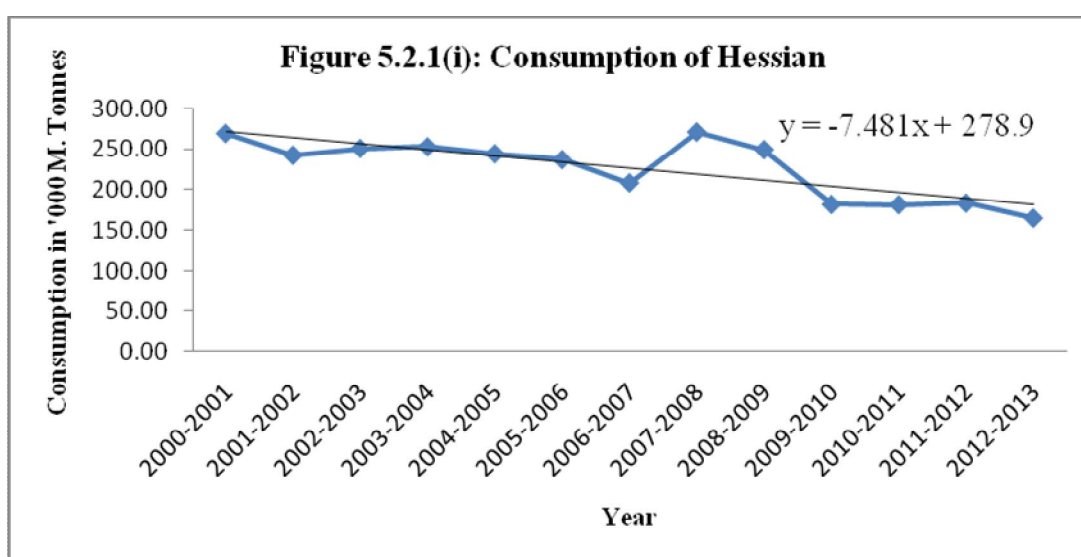
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

Descriptive Statistics of Table 5.2.1(Hessian)

Mean	226.53
SD	36.68
Maximum	271.40
Minimum	165.80

Note: Calculated Value

The Consumption of Hessian goods in India can be seen more clearly from the following graphical representation:



Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
 Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

It was evident from the above table that, consumption of Hessian has accounted for 269.70 Th. M.Tonnes in 2000-01 and ended with 165.80 Th. M.Tonnes in 2012-13. In 2007-08, consumption of Hessian goods had shown some amount of positivity accounted with 29.79 % Annual Growth Rate (AGR), but from the very next financial year it has shown continuous fall in consumption trend. During the period 2000-01 to 2012-13, CAGR of Hessian goods has (-) 3.67.

Moreover, it is also observed that average consumption of Hessian during 2000-01 to 2012-13 has accounted for 226.53 having a SD of 36.68 (i.e., fluctuation from the average value during the period of the study). During the period, 2000-01 to 2012-13 Hessian has highest production of 271.40 Th. M. Tonnes and least production of 165.80 Th. M. Tonnes respectively.

So, therefore, it is found that consumption of Hessian has shown below trend during 2000-01 to 2012-13.

Table 5.2.2: Consumption of Sacking during 2000-01 to 2012-13

Quantity in '000 M. Tonnes

Year	Sacking	AGR (%)
2000-2001	935.20	--
2001-2002	1021.40	9.22
2002-2003	954.50	-6.55
2003-2004	910.00	-4.66
2004-2005	972.40	6.86
2005-2006	974.20	0.19
2006-2007	854.40	-12.30
2007-2008	1102.00	28.98
2008-2009	1043.00	-5.35
2009-2010	879.80	-15.65
2010-2011	1034.40	17.57
2011-2012	1080.20	4.43
2012-2013	1118.70	3.56
CAGR	1.39	--

Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.

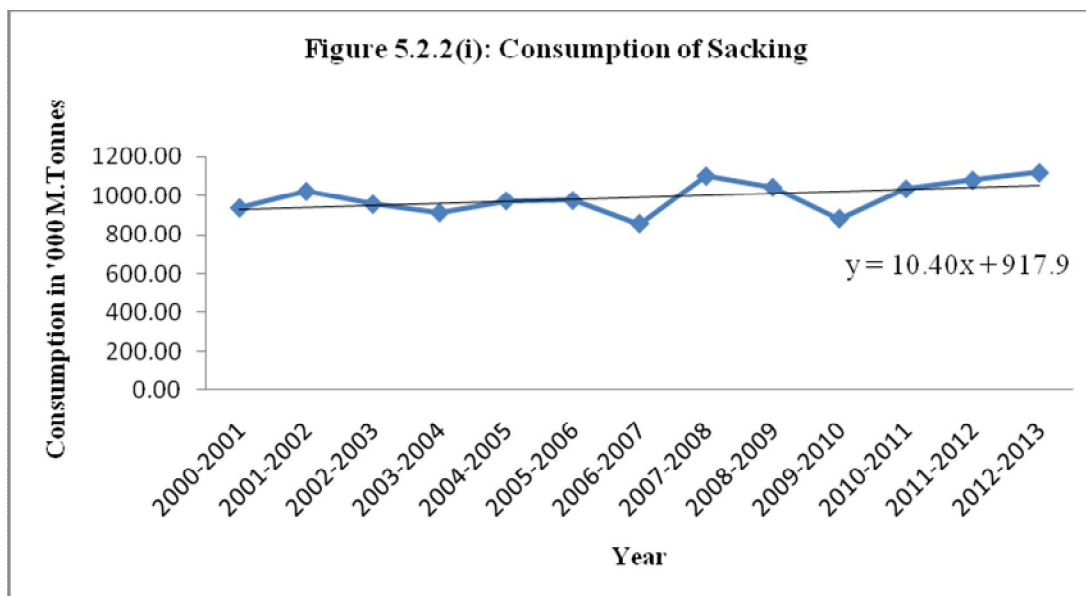
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

Descriptive Statistics of Table 5.2.2 (Sacking)

Mean	990.78
SD	84.04
Maximum	1118.70
Minimum	854.40

Note: Calculated Value.

The Consumption of Sacking goods in India can be seen more clearly from the following graphical representation:



Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
 Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

It was clear from the above table that, consumption of Sacking has accounted for 935.20 Th. M.Tonnes in 2000-01 and ended with 1118.70 Th. M.Tonnes in 2012-13. It was also depicted from the above table, consumption of Sacking goods had shown huge fall in the year 2006-07 and 2009-10.

During the period 2000-01 to 2012-13 CAGR of Sacking goods was 1.39. Moreover, it is also observed that average consumption of Sacking during 2000-01 to 2012-13 has accounted for 990.78 having a SD of 84.04 (i.e., fluctuation from the average value during the period of the study). During the period, 2000-01 to 2012-13 Sacking has highest production of 1118.70 Th. M. Tonnes and least production of 854.40 Th. M. Tonnes respectively.

So, therefore, it is found that consumption of Sacking has shown positive trend during 2000-01 to 2012-13.

Table 5.2.3: Consumption of CBC during 2000-01 to 2012-13

Quantity in '000 M. Tonnes

Year	CBC	AGR (%)
2000-2001	0.80	--
2001-2002	0.90	12.50
2002-2003	1.90	111.11
2003-2004	0.30	-84.21
2004-2005	0.50	66.67
2005-2006	0.70	40.00
2006-2007	0.50	-28.57
2007-2008	1.20	140.00
2008-2009	0.30	-75.00
2009-2010	1.20	300.00
2010-2011	0.90	-25.00
2011-2012	1.00	11.11
2012-2013	0.80	-20.00
CAGR	0.00	--

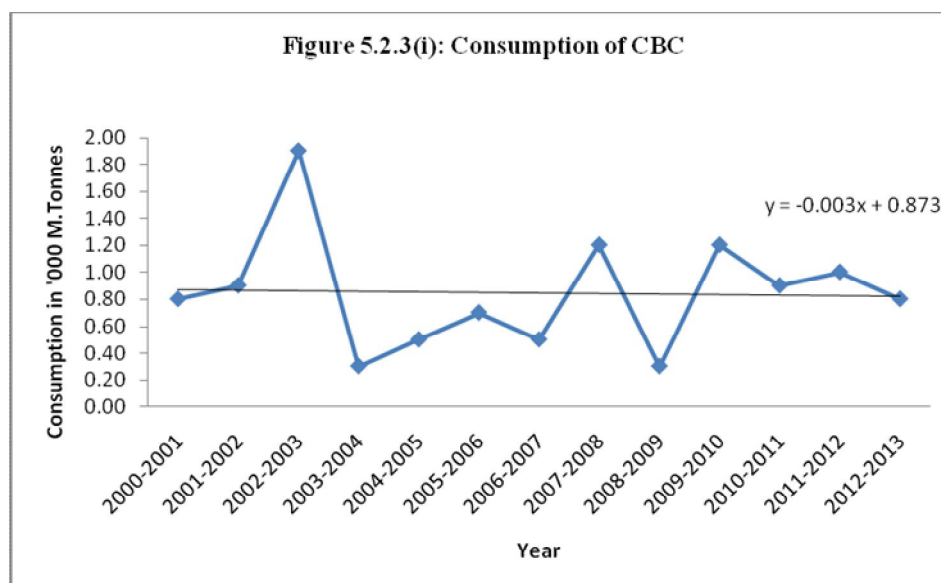
Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

Descriptive Statistics of Table 5.2.3 (CBC)

Mean	0.85
SD	0.43
Maximum	1.90
Minimum	0.30

Note: Calculated Value

The Consumption of CBC goods in India can be seen more clearly from the following graphical representation:



Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
 Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

It is clear from the above table that, consumption of CBC has accounted for 0.80 Th. M.Tonnes in 2000-01 and ended with 0.80 Th. M.Tonnes in 2012-13.

Moreover, it is also observed that average consumption of CBC during 2000-01 to 2012-13 has accounted for 0.85 having a SD of 0.43 (i.e., fluctuation from the average value during the period of the study). During the period, 2000-01 to 2012-13 CBC has highest consumption of 1.90 Th. M.Tonnes in 2002-03 and least production of 0.30 Th. M.Tonnes in 2008-09.

So, therefore, it is found that domestic consumption of CBC has shown losing trend during 2000-01 to 2012-13.

Table 5.2.4: Consumption of Yarn during 2000-01 to 2012-13

Quantity in '000 M. Tonnes

Year	Yarn	AGR (%)
2000-2001	136.70	--
2001-2002	112.80	-17.48
2002-2003	93.40	-17.20
2003-2004	113.10	21.09
2004-2005	98.10	-13.26
2005-2006	93.20	-4.99
2006-2007	89.20	-4.29
2007-2008	93.70	5.04
2008-2009	94.00	0.32
2009-2010	80.30	-14.57
2010-2011	80.60	0.37
2011-2012	70.10	-13.03
2012-2013	70.60	0.71
CAGR	-4.96	--

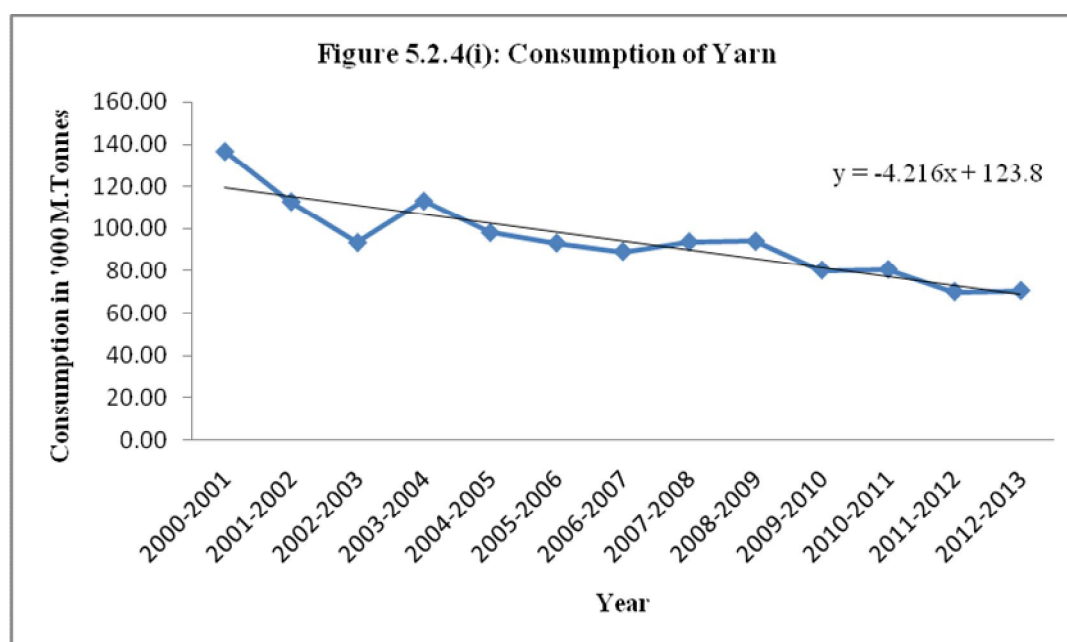
Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
 Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

Descriptive Statistics of Table 5.2.4 (Yarn)

Mean	94.29
SD	18.41
Maximum	136.70
Minimum	70.10

Note: Calculated Value.

The Consumption of Yarn goods in India can be seen more clearly from the following graphical representation:



Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

It is clear from the above table that, consumption of Yarn has accounted for 136.70 Th. M.Tonnes in 2000-01 and ended with 70.60 Th. M.Tonnes in 2012-13. During the period 2000-01 to 2012-13 it has shown negative growth having CAGR of -4.96.

Moreover, it is also observed that average consumption of Yarn during 2000-01 to 2012-13 has accounted for 94.29 having a SD of 18.41 (i.e., fluctuation from the average value during the period of the study). During the period, 2000-01 to 2012-13 Yarn has highest consumption of 136.70 Th. M.Tonnes in 2000-01 and least consumption of 70.10 Th. M.Tonnes in 2011-12.

So, therefore, it is found that domestic consumption of Yarn has shown trailing trend during 2000-01 to 2012-13.

The following table represents the domestic consumption of traditional jute goods other than major traditional jute goods produced in India from 2000-01 to 2012-13.

Table 5.2.5: Consumption of Jute Goods other than Hessian, Sacking, CBC and Yarn during 2000-01 to 2012-13

Quantity in '000 M.Tonnes

Year	C&T	AGR (%)	Webbing	AGR (%)	Felt	AGR (%)	Soil Saver	AGR (%)	Scrim Cloth	AGR (%)	Special Hessian	AGR (%)
2000-2001	60.49	--	0.03	--	0.37	--	0.54	--	0.20	--	2.11	--
2001-2002	50.78	-16.04	0.03	-16.67	0.26	-29.81	1.22	125.46	0.10	-50.00	2.08	-1.28
2002-2003	50.57	-0.42	0.05	116.00	0.48	85.33	0.31	-74.71	0.08	-20.00	0.32	-84.60
2003-2004	49.21	-2.68	0.02	-68.52	0.42	-12.92	0.43	37.86	0.07	-12.50	2.03	532.81
2004-2005	56.02	13.84	0.01	-41.18	0.77	83.25	0.09	-78.40	0.15	114.29	1.62	-19.95
2005-2006	48.59	-13.28	0.03	240.00	0.82	6.53	0.48	417.39	0.07	-53.33	2.55	57.56
2006-2007	45.40	-6.55	0.08	141.18	0.63	-22.30	0.47	-1.89	0.11	57.14	2.63	3.05
2007-2008	50.92	12.15	0.07	-10.98	0.55	-12.93	0.87	85.22	0.40	263.64	2.64	0.38
2008-2009	55.84	9.65	0.08	9.59	0.66	18.66	0.25	-70.64	0.64	60.00	2.28	-13.59
2009-2010	45.55	-18.42	0.04	-48.75	0.60	-8.70	0.41	61.42	0.26	-59.38	1.82	-20.19
2010-2011	37.31	-18.09	0.04	-14.63	0.62	3.68	0.09	-78.05	0.54	107.69	1.31	-28.05
2011-2012	36.85	-1.21	0.02	-54.29	0.55	-11.13	0.27	201.11	0.47	-12.96	0.72	-45.00
2012-2013	31.04	-15.78	0.01	-31.25	0.47	-14.34	1.02	276.01	0.55	17.02	0.68	-5.83
CAGR	-5.00	--	-7.43	--	1.91	--	4.98	--	8.12	--	-8.34	--

Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.

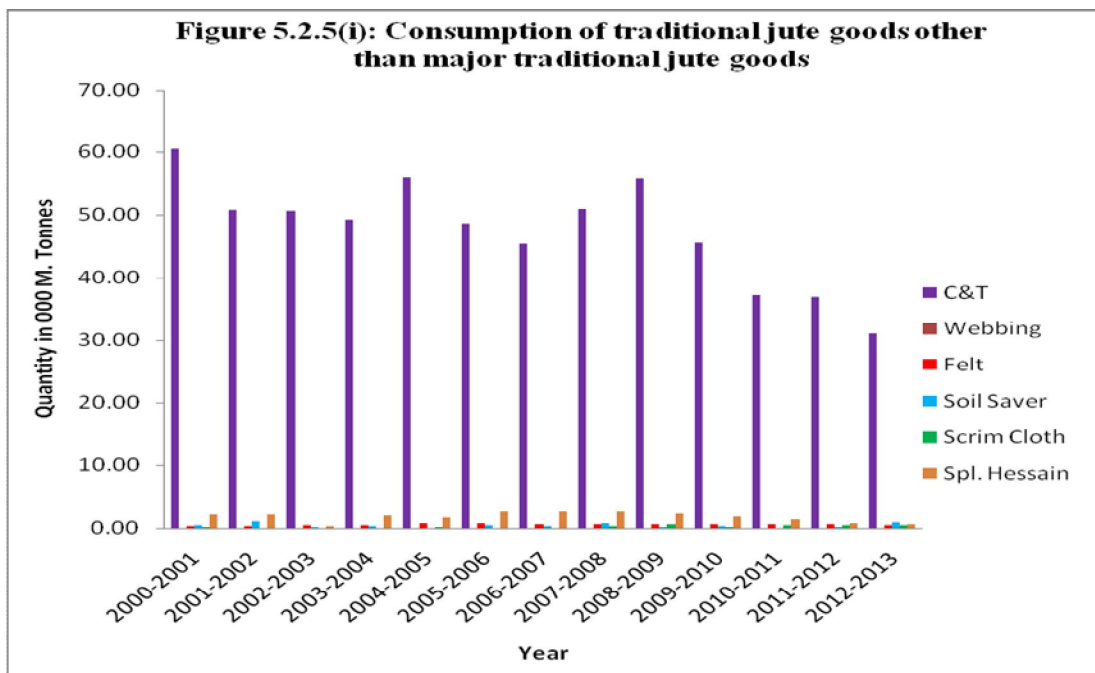
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

Descriptive Statistics of Table 5.2.5 (C&T, Webbing, Felt, Soil Saver, Scrim Cloth, Special Hessian)

Mean	47.58	0.04	0.55	0.50	0.28	1.75
SD	8.38	0.03	0.16	0.34	0.21	0.78
Maximum	60.49	0.08	0.82	1.22	0.64	2.64
Minimum	31.04	0.01	0.26	0.09	0.07	0.32

Note: Calculated Value.

The consumption of other traditional jute goods in India can be seen more clearly from the following graphical representation:



Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.

Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

From the above Table 5.2.5, it is found that the domestic consumption of traditional jute goods other than Hessian, Sacking, CBC and Yarn in India has shown a declining trend during the study period. Indeed it has found that though Felt produced in lesser quantity during the study period but the product has shown positive growth rate of 1.91 % during the period, other than this Scrim cloth and Soil saver has also accounted positive growth rate of 8.12 % and 4.98 % respectively.

Moreover it is observed that Average consumption of other traditional jute goods in India was C&T 47.58 Th. M.Tonnes, Webbing 0.04 Th. M.Tonnes, Felt 0.55 Th. M.Tonnes, Soil Saver 0.50 Th. M.Tonnes, Scrim Cloth 0.28 and Special Hessian

1.75 respectively during the study period; followed by S.D. of 8.38, 0.03, 0.16, 0.34, 0.21 and 0.78 Th. M.Tonnes respectively (i.e., fluctuation from the average value during the period of the study). During the period C&T has accounted for maximum consumption of 60.49 and minimum production of 31.04, similarly, Webbing has maximum consumption of 0.08 and minimum of 0.01, Felt has maximum consumption of 0.82 and minimum of 0.26, Soil Saver has maximum consumption of 1.22 and minimum of 0.09, Scrim Cloth maximum consumption of 0.64 and minimum of 0.07 and Special Hessian maximum of 2.64 and minimum of 0.32 Th. M. Tonnes respectively.

Table 5.2.6: Proportion of Consumption of Hessian, Sacking, CBC, Yarn and Other Traditional jute goods to Total Traditional goods Consumption in (%) during 2000-01 to 2012-13

Year	Hessian	Sacking	CBC	Yarn	Others	Total
2000-2001	19.18	66.51	0.06	9.72	4.53	100.00
2001-2002	16.96	71.30	0.06	7.87	3.80	100.00
2002-2003	18.57	70.55	0.14	6.90	3.83	100.00
2003-2004	19.06	68.48	0.02	8.51	3.93	100.00
2004-2005	17.81	70.75	0.04	7.14	4.27	100.00
2005-2006	17.49	71.73	0.05	6.86	3.87	100.00
2006-2007	17.39	71.05	0.04	7.42	4.10	100.00
2007-2008	17.81	72.32	0.08	6.15	3.64	100.00
2008-2009	17.27	72.09	0.02	6.50	4.13	100.00
2009-2010	15.31	73.77	0.10	6.73	4.08	100.00
2010-2011	13.62	77.30	0.07	6.02	2.98	100.00
2011-2012	13.40	78.60	0.07	5.10	2.83	100.00
2012-2013	11.93	80.50	0.06	5.08	2.43	100.00

Source: Calculated Value.

As it may be clearly seen from the above Table 5.2.6, in 2000-01, out of total consumption of traditional jute goods, about 66.51 % of jute goods was Sacking while Hessian, CBC, Yarn and Other Traditional jute goods accounted for only 19.18 %, 0.06 %, 9.72 % and 4.53 % respectively, and ended with Sacking accounted 80.50 %, Hessian 11.93 %, CBC 0.06 %, Yarn 5.08 % and Other traditional goods accounted with 2.43 % in 2012-13 of total production of traditional jute goods.

It has found that the proportion of Hessian, CBC, Yarn and Other products had shown declining over time. As consumption of Sacking goods had shown positive growth during 2000-01 to 2012-13.

5.3 Export of Traditional Jute Products

The export of traditional jute products had decreased during the last few decades. Out of India's total production of 1392.40 Th. M. Tonnes in 1980-81, the quantity of goods sold in export market was 326.10 Th. M. Tonnes (59.19 per cent) of total production, whereas only 14 per cent of jute goods were exported during 1990-91. By 2012-13, total production was 1591.30 Th. M. Tonnes out of this 185.40 Th. M. Tonnes (11.65 per cent) was exported. It has been clear that since last two decades export of jute goods had decreased heavily. In export marketing system, it can be said that Indian jute goods producers is not sufficiently market oriented (Goyal, 1990). Because of its structure and inadequate funds for marketing, it has been difficult for the manufacturers to adopt a systematic way of marketing to place their products globally and to compete with other substitutes to packaging.

The following table represents the export of traditional jute goods India from 2000-01 to 2012-13.

Table 5.3.1: Export of Hessian during 2000-01 to 2012-13

Quantity in '000 M. Tonnes		
Year	Hessian	AGR (%)
2000-2001	56.60	--
2001-2002	51.60	-8.83
2002-2003	100.80	95.35
2003-2004	157.10	55.85
2004-2005	153.70	-2.16
2005-2006	171.60	11.65
2006-2007	122.20	-28.79
2007-2008	26.70	-78.15
2008-2009	27.40	2.62
2009-2010	15.70	-42.70
2010-2011	37.90	141.40
2011-2012	75.02	97.94
2012-2013	66.20	-11.76
CAGR	1.21	--

Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.

Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

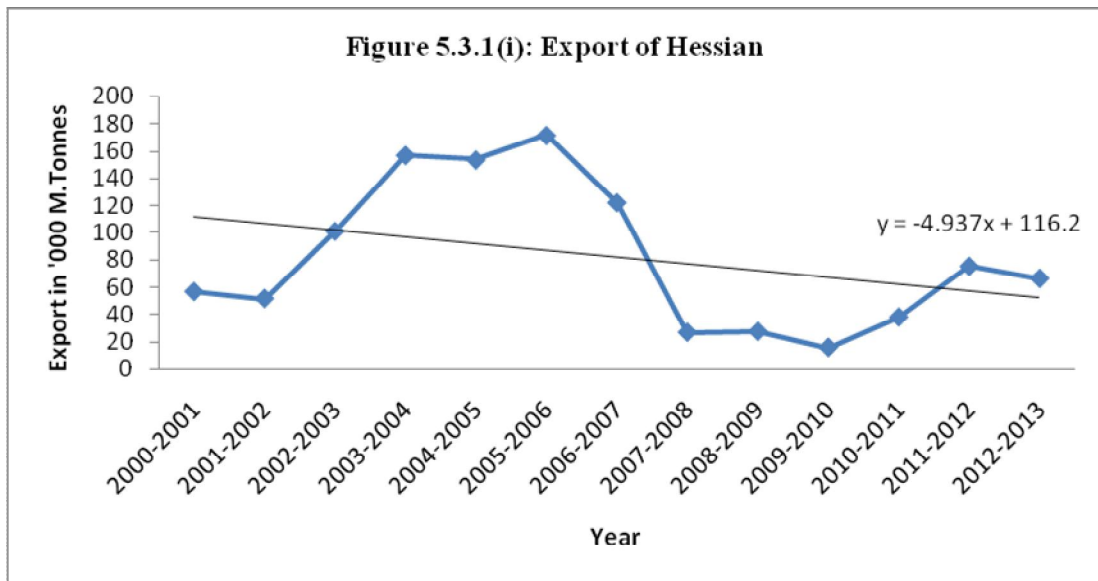
Note: Goods exported in Square Metre are not taken in the study.

Descriptive Statistics of Table 5.3.1(Hessian)

Mean	81.73
SD	54.03
Maximum	171.60
Minimum	15.70

Note: Calculated.

The export of Hessian goods from India can be seen more clearly from the following graphical representation:



Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
 Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

It was evident from the above table that, export of Hessian has accounted for 56.60 Th. M.Tonnes in 2000-01 and ended with 66.20 Th. M.Tonnes in 2012-13. Export of Hessian goods shown great hike during the period 2002-03 to 2006-07, in 2007-08 it has shown a heavy downfall and accounted with 26.70 having a AGR of (-) 78.15. CAGR of Hessian goods has accounted for 1.21 during 2000-01 to 2012-13.

Moreover, it is also observed that average export of Hessian during 2000-01 to 2012-13 has accounted for 81.73 having a SD of 54.03 (i.e., fluctuation from the average value during the period of the study). During the period, 2000-01 to 2012-13 Hessian has highest export of 171.60 in 2005-06 and least export of 15.70 in 2009-10.

So, therefore, it is found that export of Hessian has shown mixed/ fluctuating trend during 2000-01 to 2012-13.

Table 5.3.2: Export of Sacking during 2000-01 to 2012-13

Quantity in '000 M. Tonnes

Year	Sacking	AGR (%)
2000-2001	2.50	--
2001-2002	2.10	-16.00
2002-2003	6.10	190.48
2003-2004	33.40	447.54
2004-2005	31.20	-6.59
2005-2006	33.20	6.41
2006-2007	31.60	-4.82
2007-2008	33.60	6.33
2008-2009	61.50	83.04
2009-2010	26.70	-56.59
2010-2011	42.88	60.60
2011-2012	72.96	70.15
2012-2013	67.70	-7.21
CAGR	28.89	--

Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.

Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

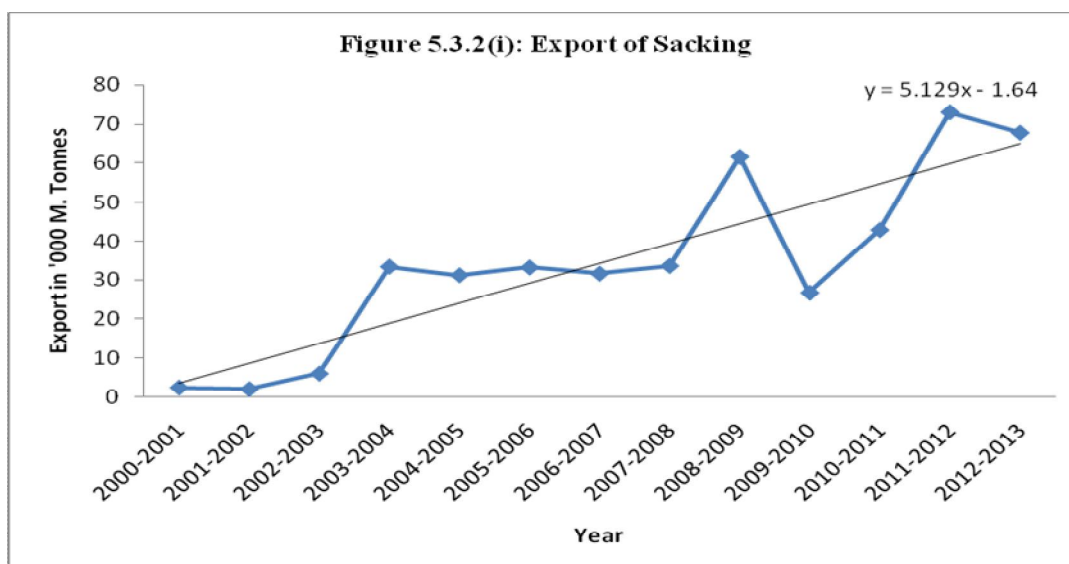
Note: Goods exported in Square Meter are not taken in the study.

Descriptive Statistics of Table 5.3.2 (Sacking)

Mean	34.26
SD	22.99
Maximum	72.96
Minimum	2.10

Note: Calculated.

The export of Sacking goods from India can be seen more clearly from the following graphical representation:



Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
 Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

It may very clearly from the above table that, export of Sacking has accounted for 2.50 Th. M.Tonnes in 2000-01 and ended with 67.70 Th. M.Tonnes in 2012-13. Export of Sacking goods shown great hike during the period 2000-01 to 2012-13. In 2009-10 it has shown a heavy fall and accounted with 26.70 having a AGR of (-) 56.59. CAGR of Sacking goods has accounted for 28.89 during 2000-01 to 2012-13.

Moreover, it is also observed that average export of Sacking during 2000-01 to 2012-13 has accounted for 34.26 having a SD of 22.99(i.e., fluctuation from the average value during the period of the study). During the period, 2000-01 to 2012-13 Sacking has highest export of 72.96 in 2011-12 and least export of 2.10 in 2001-02.

So, therefore, it is found that export of Sacking has shown positive growth during 2000-01 to 2012-13.

Table 5.3.3: Export of CBC during 2000-01 to 2012-13

Quantity in '000 M. Tonnes

Year	CBC	AGR (%)
2000-2001	4.2	--
2001-2002	2.9	-30.95
2002-2003	2.8	-3.45
2003-2004	5.2	85.71
2004-2005	1.5	-71.15
2005-2006	0.9	-40
2006-2007	0.1	-88.89
2007-2008	NA	--
2008-2009	NA	--
2009-2010	NA	--
2010-2011	NA	--
2011-2012	NA	--
2012-2013	NA	--
CAGR	--	--

Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
 Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

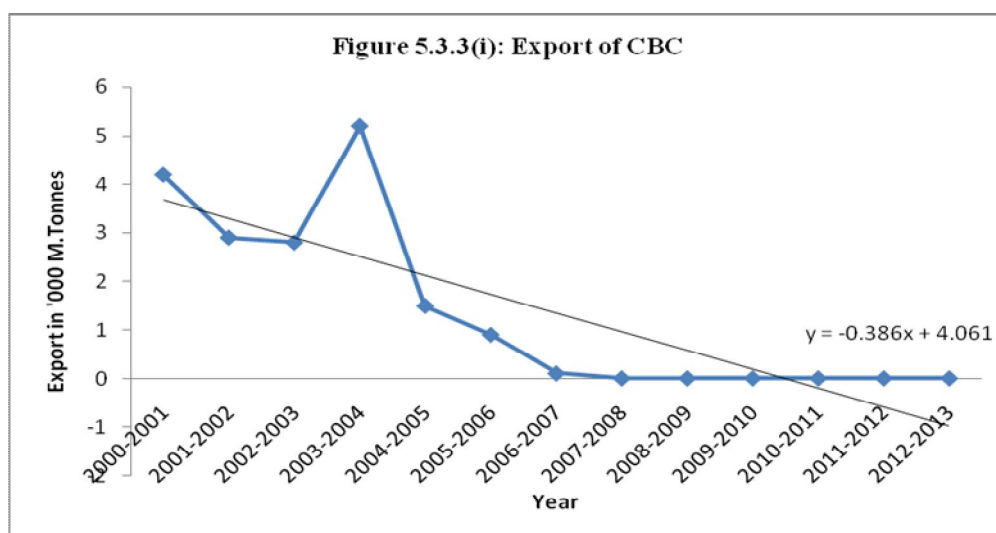
Note: Goods exported in Square Metre are not taken in the study.

Descriptive Statistics of Table 5.3.3(CBC)

Mean	2.51
SD	1.81
Maximum	5.20
Minimum	0.10

Note: Calculated.

The export of CBC goods from India can be seen more clearly from the following graphical representation:



Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
 Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

It was evident from the above table that, export of CBC has accounted for 4.2 Th. M.Tonnes in 2000-01 and ended with 0.01 Th. M.Tonnes in 2006-07. Moreover, it is also observed that average export of CBC during 2000-01 to 2012-13 has accounted for 2.51 having a SD of 1.81 (i.e., fluctuation from the average value during the period of the study). During the period, 2000-01 to 2012-13 CBC has highest export of 5.20 in 2003-04 and least export of 0.01 in 2006-07.

So, therefore, it is found that export of CBC has shown losing trend in international market during 2000-01 to 2012-13.

Table 5.3.4: Export of Yarn during 2000-01 to 2012-13

Quantity in '000 M. Tonnes

Year	Yarn	AGR (%)
2000-2001	97.80	--
2001-2002	77.00	-21.27
2002-2003	77.10	0.13
2003-2004	90.60	17.51
2004-2005	120.40	32.89
2005-2006	69.10	-42.61
2006-2007	78.30	13.31
2007-2008	79.90	2.04
2008-2009	64.20	-19.65
2009-2010	33.40	-47.98
2010-2011	85.40	155.69
2011-2012	54.73	-35.91
2012-2013	43.80	-19.97
CAGR	-5.99	--

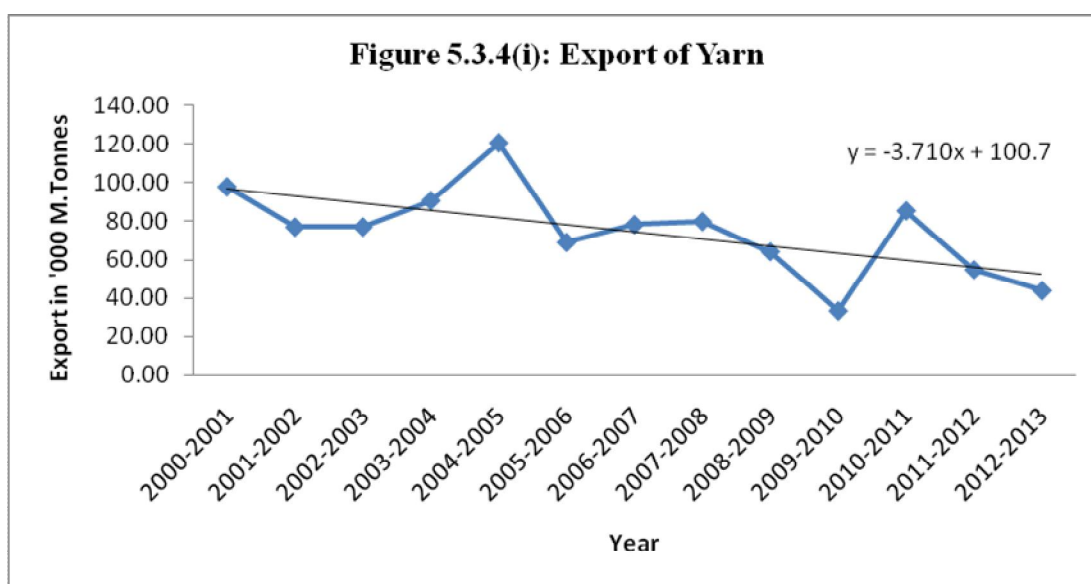
Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
 Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

Descriptive Statistics of Table 5.3.4 (Yarn)

Mean	74.75
SD	22.81
Maximum	120.40
Minimum	33.40

Note: Calculated.

The export of Yarn goods from India can be seen more clearly from the following graphical representation:



Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

It may clear from the above table that, export of Yarn has accounted for 97.80 Th. M.Tonnes in 2000-01 and ended with 43.80 Th. M.Tonnes in 2012-13. CAGR of export of Yarn accounted for (-) 5.99.

Moreover, it is also observed that average export of Yarn during 2000-01 to 2012-13 has accounted for 74.75 having a SD of 22.81 (i.e., fluctuation from the average value during the period of the study). During the period, 2000-01 to 2012-13 Yarn has highest export of 120.40 in 2004-05 and least export of 33.40 in 2009-10.

So, therefore, it is found that export of Yarn has shown losing trend in international market during 2000-01 to 2012-13.

Table 5.3.5: Export of Soil saver during 2000-01 to 2012-13

Quantity in '000 M. Tonnes

Year	Soil saver	AGR (%)
2000-2001	5.60	--
2001-2002	4.00	-28.57
2002-2003	9.30	132.50
2003-2004	10.50	12.90
2004-2005	6.50	-38.10
2005-2006	4.90	-24.62
2006-2007	4.70	-4.08
2007-2008	5.90	25.53
2008-2009	3.80	-35.59
2009-2010	3.50	-7.89
2010-2011	3.90	11.43
2011-2012	3.20	-17.95
2012-2013	2.60	-18.75
CAGR	-5.73	--

Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.

Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

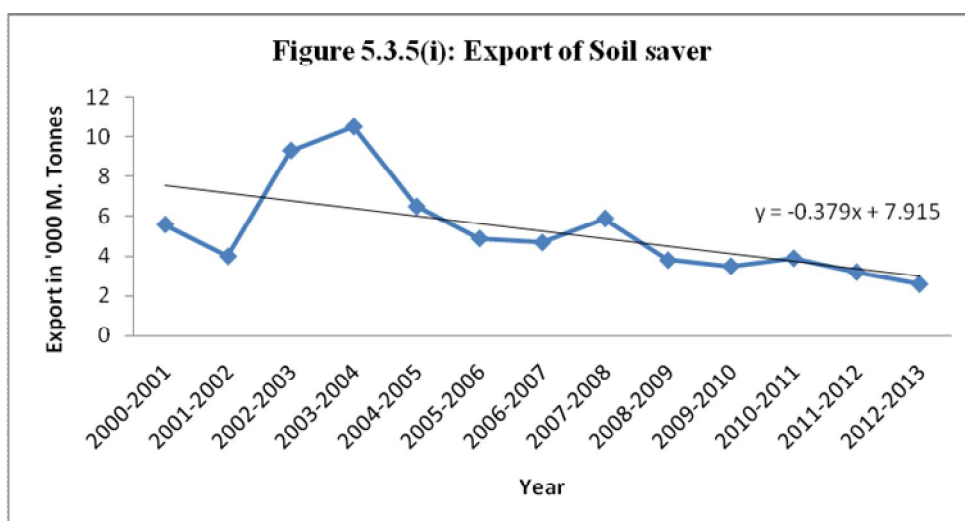
Note: Goods exported in Square Metre are not taken in the study.

Descriptive Statistics of Table 5.3.5 (Soil saver)

Mean	5.26
SD	2.35
Maximum	10.50
Minimum	2.60

Note: Calculated.

The export of Soil saver goods from India can be seen more clearly from the following graphical representation:



Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
 Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

It may depict from the above table that, export of Soil saver has accounted for 5.60 Th. M.Tonnes in 2000-01 and ended with 2.60 Th. M.Tonnes in 2012-13. CAGR of export of Soil saver accounted for (-) 5.73.

Moreover, it is also observed that average export of Soil saver during 2000-01 to 2012-13 has accounted for 5.26 having a SD of 2.35 (i.e., fluctuation from the average value during the period of the study). During the period, 2000-01 to 2012-13 Soil savers has highest export of 10.50 in 2003-04 and least export of 2.60 in 2012-13.

So, therefore, it is found that export of Soil saver has shown declining trend in international market during 2000-01 to 2012-13.

Table 5.3.6: Other Traditional Jute goods Exported from India during 2000-01 to 2012-13

Year	Quantity	Quantity in '000 M. Tonnes
		AGR (%)
2000-2001	9.10	--
2001-2002	5.60	-38.46
2002-2003	6.30	12.50
2003-2004	13.60	115.87
2004-2005	8.50	-37.50
2005-2006	6.10	-28.24
2006-2007	5.90	-3.28
2007-2008	3.40	-42.37
2008-2009	5.50	61.76
2009-2010	4.50	-18.18
2010-2011	5.50	22.22
2011-2012	5.90	7.27
2012-2013	5.10	-13.56
CAGR	-4.36	--

Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
 Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

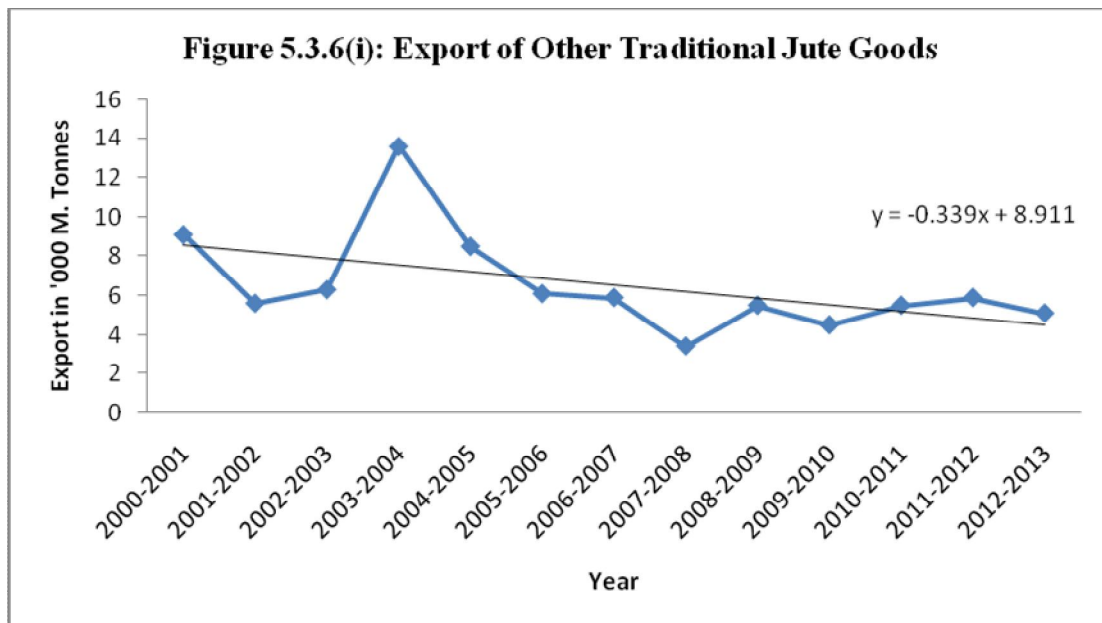
Note: Goods exported in Square Metre are not taken in the study.

Descriptive Statistics of Table 5.3.6 (Others)

Mean	6.54
SD	2.59
Maximum	13.60
Minimum	3.40

Note: Calculated.

The export of other traditional jute goods from India can be seen more clearly from the following graphical representation:



Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
 Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

It may depict from the above table that, export of other traditional jute goods has accounted for 9.10 Th. M.Tonnes in 2000-01 and ended with 5.10 Th. M.Tonnes in 2012-13. CAGR of export of other traditional jute goods accounted for (-) 4.36.

Moreover, it is also observed that average export of other traditional jute goods during 2000-01 to 2012-13 has accounted for 6.54 having a SD of 2.59 (i.e., fluctuation from the average value during the period of the study). During the period, 2000-01 to 2012-13 other traditional jute goods has highest export of 13.60 in 2003-04 and least export of 3.40 in 2007-08.

So, therefore, it is found that export of other traditional jute goods has shown waning trend in international market during 2000-01 to 2012-13.

Table 5.3.7: Proportion of Hessian, Sacking, CBC, Yarn, Soil saver and Other Traditional jute goods to Total Export of Traditional Jute Goods in (%) during 2000-01 to 2012-13

Year	Hessian	Sacking	CBC	Yarn	Soil saver	Others	Total
2000-2001	32.20	1.42	2.39	55.63	3.19	5.18	100.00
2001-2002	36.03	1.47	2.03	53.77	2.79	3.91	100.00
2002-2003	49.80	3.01	1.38	38.09	4.59	3.11	100.00
2003-2004	50.61	10.76	1.68	29.19	3.38	4.38	100.00
2004-2005	47.76	9.70	0.47	37.41	2.02	2.64	100.00
2005-2006	60.04	11.62	0.31	24.18	1.71	2.13	100.00
2006-2007	50.33	13.01	0.04	32.25	1.94	2.43	100.00
2007-2008	17.86	22.47	0.00	53.44	3.95	2.27	100.00
2008-2009	16.87	37.87	0.00	39.53	2.34	3.39	100.00
2009-2010	18.74	31.86	0.00	39.86	4.18	5.37	100.00
2010-2011	21.59	24.42	0.00	48.64	2.22	3.13	100.00
2011-2012	35.42	34.45	0.00	25.84	1.51	2.79	100.00
2012-2013	35.71	36.52	0.00	23.62	1.40	2.75	100.00

Note: Calculated Value.

As it may be clearly seen from the above Table 5.3.7, in 2000-01, out of total export of traditional jute goods, about 55.63 % of jute goods was Yarn while Hessian, Sacking, CBC, Yarn, Soil saver and Other Traditional jute goods accounted for only 32.20 %, 1.42 %, 2.39 %, 3.19 % and 5.18 % respectively, and ended with Sacking accounted 36.52 %, Hessian 35.71 %, CBC 0.00 %, Yarn 23.62 %, Soil saver 1.40 %) and Other traditional goods accounted with 2.75 % in 2012-13 to total export of traditional jute goods.

It has found that the proportion of Hessian, CBC, Yarn and Other products had shown declining over time. As export of Sacking goods had shown positive growth during 2000-01 to 2012-13.

The following table represents the export earnings from traditional jute goods exported from India during the period 2000-01 to 2012-13.

Table 5.3.8: Export earnings from Hessian during 2000-01 to 2012-13

Value in Rs. Crores

Year	Hessian	AGR (%)
2000-2001	205.84	--
2001-2002	187.36	-8.98
2002-2003	353.3	88.57
2003-2004	414.59	17.35
2004-2005	424.98	2.51
2005-2006	493.35	16.09
2006-2007	376.12	-23.76
2007-2008	116.43	-69.05
2008-2009	124.31	6.77
2009-2010	85.27	-31.41
2010-2011	205.14	140.58
2011-2012	419.86	104.67
2012-2013	407.12	-3.03
CAGR	5.39	--

Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.

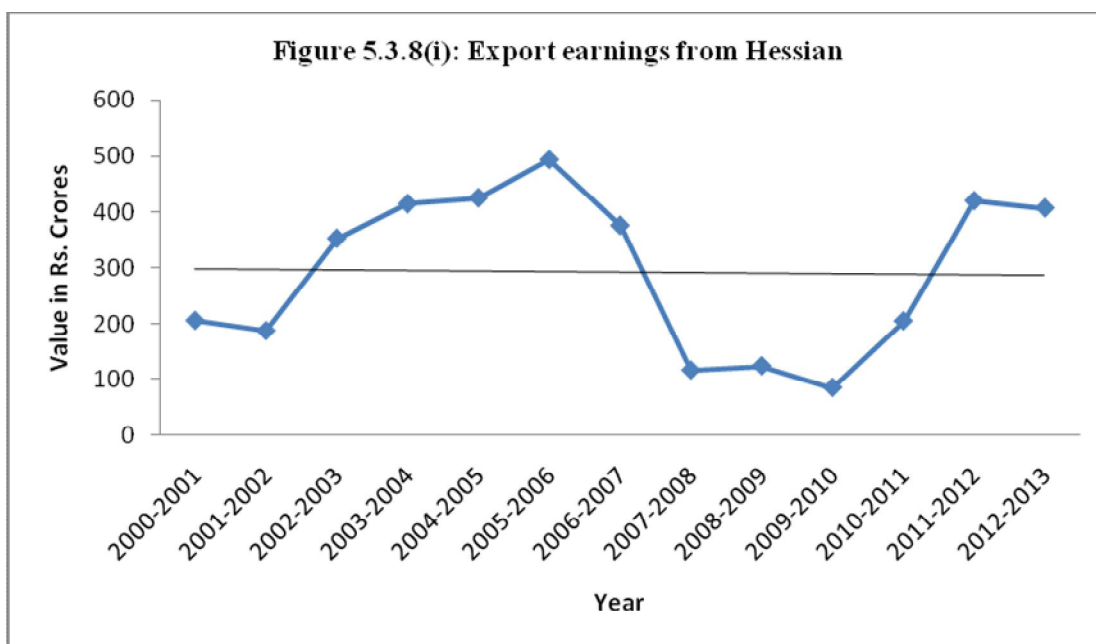
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

Descriptive Statistics of Table 5.3.8 (Hessian)

Mean	293.36
SD	141.79
Maximum	493.35
Minimum	85.27

Note: Calculated

The export earnings from Hessian goods can be seen more clearly from the following graphical representation:



Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
 Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

It was depicted from the above table that, export earnings of Hessian has accounted for 205.84 Rs. Crores in 2000-01 and ended with 407.12 Rs. Crores in 2012-13. Export earnings from Hessian goods shown great hike during the period 2002-03 to 2005-06. In, 2007-08 and 2009-10 it has shown a heavy downfall and accounted with 116.43 Rs. Crores having AGR of (-) 69.05, and 85.21 Rs. Crores having AGR of (-) 31.41 respectively. CAGR of Hessian goods has accounted for 5.39 during 2000-01 to 2012-13.

Moreover, it is also observed that average export earnings of Hessian during 2000-01 to 2012-13 has accounted for 293.36 having a SD of 141.75 (i.e., fluctuation from the average value during the period of the study). During the period, 2000-01 to 2012-13 Hessian has highest export earnings of 493.35 in 2005-06 and smallest amount of 85.27 in 2009-10.

So, therefore, it is found that export earnings of Hessian has shown mixed/fluctuating trend during 2000-01 to 2012-13.

Table 5.3.9: Export earnings from Sacking during 2000-01 to 2012-13

Value in Rs. Crores

Year	Sacking	AGR (%)
2000-2001	9.04	--
2001-2002	7.36	-18.64
2002-2003	18.74	154.72
2003-2004	84.67	351.93
2004-2005	77.72	-8.20
2005-2006	99.64	28.19
2006-2007	103.25	3.63
2007-2008	100.34	-2.81
2008-2009	199.22	98.54
2009-2010	102.83	-48.38
2010-2011	208.92	103.17
2011-2012	406.49	94.57
2012-2013	400.63	-1.44
CAGR	33.86	--

Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.

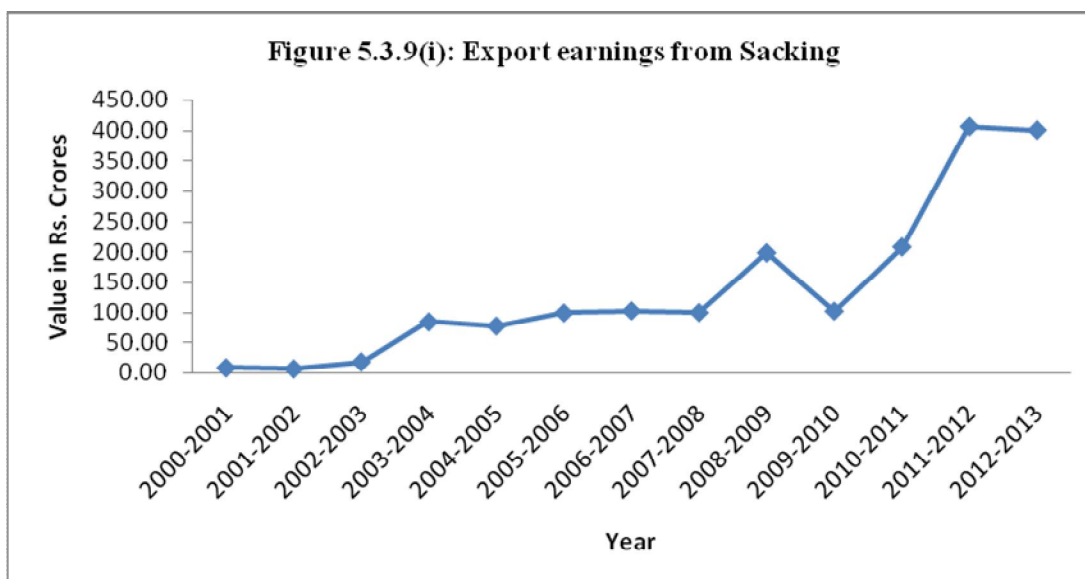
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

Descriptive Statistics of Table 5.3.9 (Sacking)

Mean	139.91
SD	132.14
Maximum	406.49
Minimum	7.36

Note: Calculated.

The export earnings from Sacking goods can be seen more clearly from the following graphical representation:



Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
 Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

It was depicted from the above table that, export earnings of Sacking has accounted for 9.04 Rs. Crores in 2000-01 and ended with 400.63 Rs. Crores in 2012-13. In 2009-10, export earnings of Sacking have shown a heavy downfall accounted with 102.83 Rs. Crores having AGR of (-) 48.38. CAGR of Sacking goods has accounted for 33.86 during 2000-01 to 2012-13.

Moreover, it is also observed that average export earnings of Sacking during 2000-01 to 2012-13 has accounted for 139.91 having a SD of 132.14 (i.e., fluctuation from the average value during the period of the study). During the period, 2000-01 to 2012-13 Sacking has highest export earnings of 406.49 in 2011-12 and least amount of 7.26 in 2001-02.

So, therefore, it is found that export earnings from Sacking goods has shown positive growth during 2000-01 to 2012-13. Over the period of time demand of Sacking goods has raised in international market.

Table 5.3.10: Export earnings from CBC during 2000-01 to 2012-13

Value in Rs. Crores

Year	CBC	AGR (%)
2000-2001	14.02	--
2001-2002	9.86	-29.64
2002-2003	10.5	6.46
2003-2004	15.63	48.82
2004-2005	6.25	-60.01
2005-2006	4.46	-28.58
2006-2007	0.65	-85.42
2007-2008	NA	--
2008-2009	NA	--
2009-2010	NA	--
2010-2011	NA	--
2011-2012	NA	--
2012-2013	NA	--
CAGR	--	--

Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.

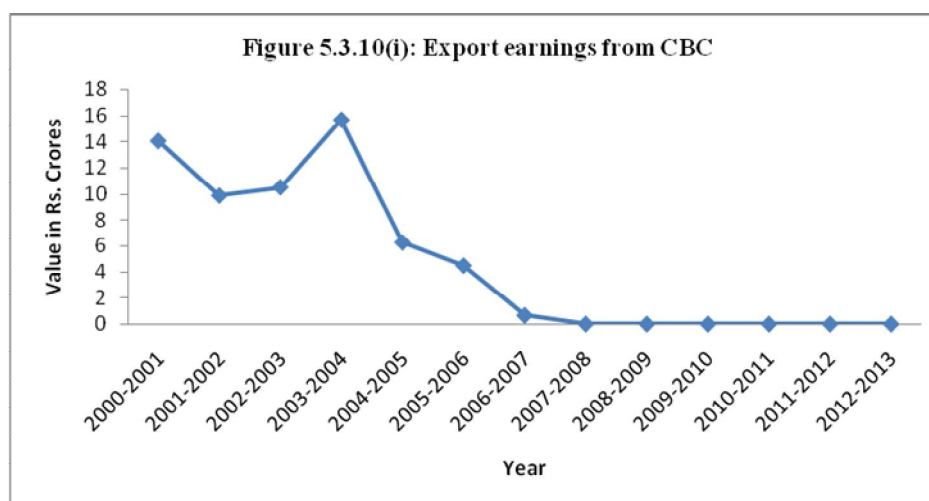
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

Descriptive Statistics of Table 5.3.10 (CBC)

Mean	8.77
SD	5.32
Maximum	15.63
Minimum	0.65

Note: Calculated.

The export earnings from CBC goods can be seen more clearly from the following graphical representation:



Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

It was clear from the above table that, export earnings of CBC has accounted for 14.02 Rs. Crores in 2000-01 and ended with 0.65 Rs. Crores in 2006-07.

Moreover, it is also observed that average export earnings of CBC during 2000-01 to 2012-13 has accounted for 8.77 having a SD of 5.32 (i.e., fluctuation from the average value during the period of the study). During the period, 2000-01 to 2012-13 CBC has highest export earnings of 15.63 in 2003-04 and least amount of 0.65 in 2006-07.

So, therefore, it is found that export earnings from CBC goods has shown downwards trend during 2000-01 to 2012-13. Over the period of time demand of CBC goods has go down in international market and stopped exporting of CBC goods since 2007-08.

Table 5.3.11: Export earnings from Yarn during 2000-01 to 2012-13

Value in Rs. Crores		
Year	Yarn	AGR (%)
2000-2001	265.18	--
2001-2002	221.24	-16.57
2002-2003	223.77	1.14
2003-2004	246.92	10.35
2004-2005	336.58	36.31
2005-2006	239.46	-28.85
2006-2007	273.15	14.07
2007-2008	246.68	-9.69
2008-2009	216.92	-12.07
2009-2010	144.20	-33.52
2010-2011	530.96	268.21
2011-2012	282.01	-46.89
2012-2013	221.16	-21.58
CAGR	-1.39	--

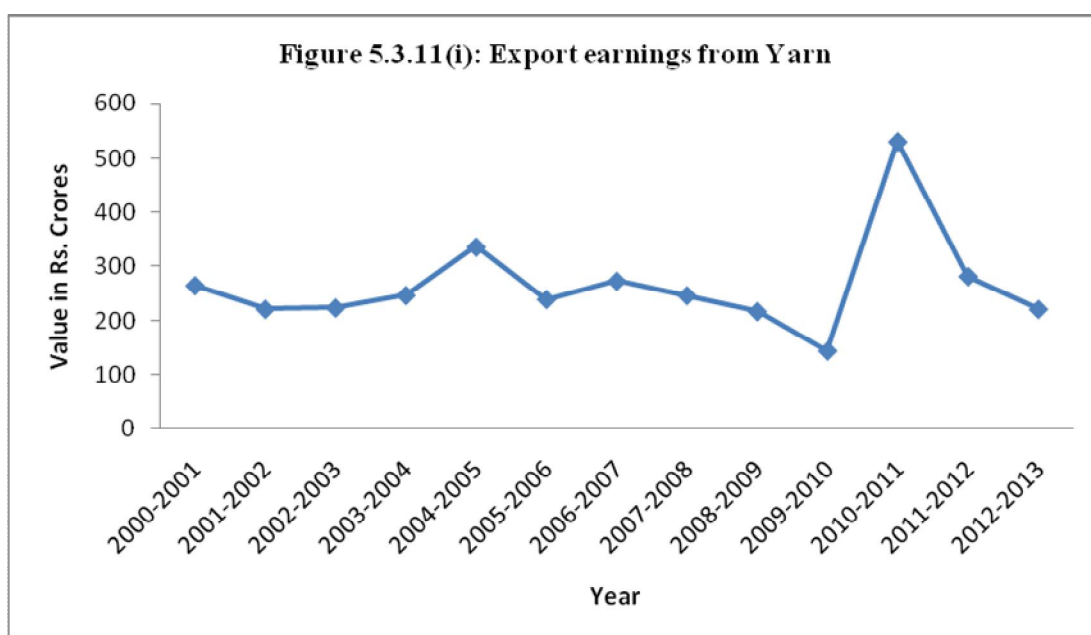
Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

Descriptive Statistics of Table 5.3.11 (Yarn)

Mean	265.25
SD	91.27
Maximum	530.96
Minimum	144.20

Note: Calculated.

The export earnings from Yarn goods can be seen more clearly from the following graphical representation:



Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

It was depicted from the above table that, export earnings of Yarn has accounted for 265.18 Rs. Crores in 2000-01 and ended with 221.66 Rs. Crores in 2012-13. In 2010-11, export earnings of Yarn have shown a great hike accounted with 530.96 Rs. Crores having AGR of 268.21. CAGR of Yarn goods has accounted for (-) 1.39 during 2000-01 to 2012-13.

Moreover, it is also observed that average export earnings of Yarn during 2000-01 to 2012-13 has accounted for 265.25 having a SD of 91.27 (i.e., fluctuation from the average value during the period of the study). During the period, 2000-01 to 2012-13 Yarn has highest export earnings of 530.96 in 2010-11 and least amount of 144.20 in 2009-10.

So, therefore, it is found that export earnings from Yarn goods has shown fluctuating trend during 2000-01 to 2012-13. Over the period of time demand of Yarn goods has raised in international market but due to some internal factors it is not able to grab the market continuously.

Table 5.3.12: Export earnings from Soil saver during 2000-01 to 2012-13

Value in Rs. Crores

Year	Soil saver	AGR (%)
2000-2001	5.97	--
2001-2002	6.11	2.41
2002-2003	12.65	106.84
2003-2004	13.08	3.44
2004-2005	9.37	-28.38
2005-2006	7.29	-22.24
2006-2007	7.89	8.26
2007-2008	10.54	33.64
2008-2009	8.06	-23.58
2009-2010	6.98	-13.31
2010-2011	7.66	9.75
2011-2012	7.04	-8.09
2012-2013	8.68	23.2
CAGR	2.92	--

Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.

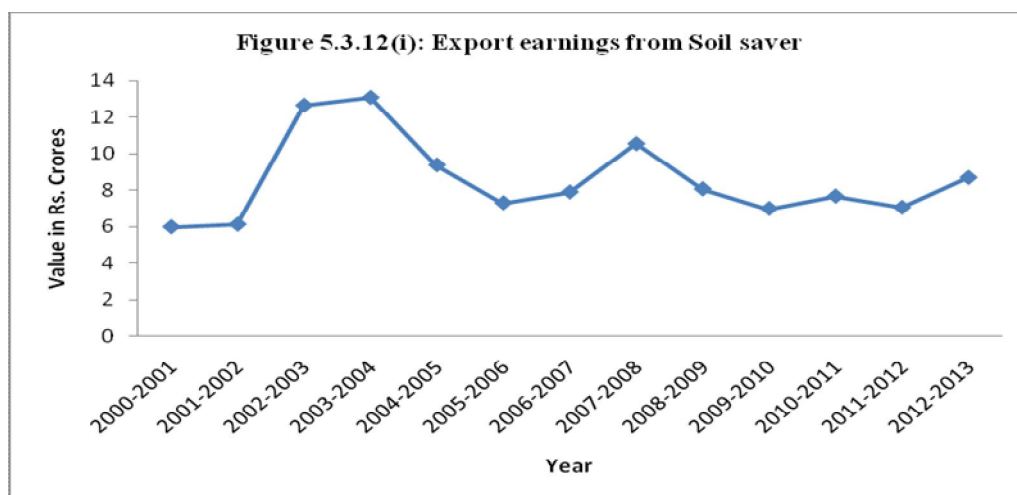
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

Descriptive Statistics of Table 5.3.12 (Soil saver)

Mean	8.56
SD	2.28
Maximum	13.08
Minimum	5.97

Note: Calculated.

The export earnings from Soil saver goods can be seen more clearly from the following graphical representation:



Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

It was depicted from the above table that, export earnings of Soil saver has accounted for 5.97 Rs. Crores in 2000-01 and ended with 8.68 Rs. Crores in 2012-13. During the period 2000-01 to 2012-13 it has shown ups and downs in earnings.

Moreover, it is also observed that CAGR of Soil saver goods has accounted for 2.92 during 2000-01 to 2012-13, average export earnings of Soil saver during 2000-01 to 2012-13 has accounted for 8.56 having a SD of 2.82 (i.e., fluctuation from the average value during the period of the study). During the period, 2000-01 to 2012-13 Soil saver has highest export earnings of 13.08 in 2003-04 and least amount of 5.97 in 2000-01.

So, therefore, it is found that export earnings from Soil saver goods has shown fluctuating trend during 2000-01 to 2012-13.

Table 5.3.13: Export earnings from other traditional Jute Goods during 2000-01 to 2012-13
Value in Rs. Crores

Year	Others	AGR (%)
2000-2001	34.54	--
2001-2002	27.93	-19.13
2002-2003	23.86	-14.59
2003-2004	53.72	125.17
2004-2005	38.26	-28.78
2005-2006	29.46	-23
2006-2007	37.62	27.71
2007-2008	47.54	26.36
2008-2009	64.41	35.48
2009-2010	47.78	-25.82
2010-2011	80.77	69.06
2011-2012	87.85	8.77
2012-2013	78.44	-10.71
Total	652.18	
CAGR	6.51	

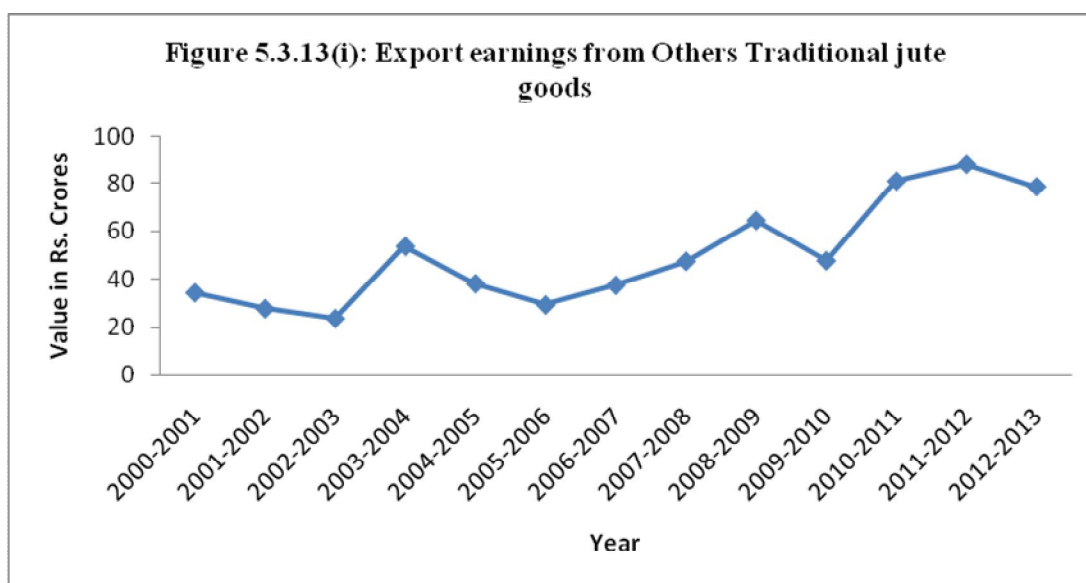
Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

Descriptive Statistics of Table 5.3.13 (Others)

Mean	50.17
SD	21.49
Maximum	87.85
Minimum	23.86

Note: Calculated.

The export earnings from other traditional jute goods can be seen more clearly from the following graphical representation:



Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

It was depicted from the above table that, export earnings of other traditional jute goods has accounted for 34.54 Rs. Crores in 2000-01 and ended with 78.44 Rs. Crores in 2012-13. CAGR of other traditional jute goods has accounted for 6.51 during 2000-01 to 2012-13.

Moreover, it is also observed that average export earnings of other traditional jute goods during 2000-01 to 2012-13 has accounted for 50.17 having a SD of 21.49 (i.e., fluctuation from the average value during the period of the study). During the period, 2000-01 to 2012-13 other traditional jute goods has highest export earnings of 87.85 in 2011-12 and least amount of 23.86 in 2002-03.

So, therefore, it is found that over the period of time export earnings of other traditional jute goods have shown minor ups and downs.

Table 5.3.14: Proportion of export earnings from Hessian, Sacking, CBC, Yarn, Soil saver and Other Traditional jute goods to total export earning of Traditional jute goods in (%) during 2000-01 to 2012-13

Year	Hessian	sacking	CBC	Yarn	Soil saver	Others	Total
2000-2001	38.50	1.69	2.62	49.60	1.12	6.46	100.00
2001-2002	40.74	1.60	2.14	48.11	1.33	6.07	100.00
2002-2003	54.96	2.92	1.63	34.81	1.97	3.71	100.00
2003-2004	50.03	10.22	1.89	29.80	1.58	6.48	100.00
2004-2005	47.58	8.70	0.70	37.68	1.05	4.28	100.00
2005-2006	56.47	11.40	0.51	27.41	0.83	3.37	100.00
2006-2007	47.09	12.93	0.08	34.20	0.99	4.71	100.00
2007-2008	22.32	19.24	0.00	47.30	2.02	9.12	100.00
2008-2009	20.28	32.50	0.00	35.39	1.32	10.51	100.00
2009-2010	22.03	26.57	0.00	37.26	1.80	12.34	100.00
2010-2011	19.85	20.22	0.00	51.38	0.74	7.82	100.00
2011-2012	34.89	33.78	0.00	23.44	0.59	7.30	100.00
2012-2013	36.48	35.90	0.00	19.82	0.78	7.03	100.00

Note: Calculated Value.

As it may be clearly seen from the above Table 5.3.14, in 2000-01, out of total export earnings of traditional jute goods, about 49.60 % of jute goods was Yarn; while Hessian, Sacking, CBC, Soil saver and Other Traditional jute goods accounted for only 38.50 %, 1.69 %, 2.62 %, 1.12 % and 6.46 % respectively, and ended with Sacking accounted 35.90 %, Hessian 36.48 %, CBC 0.00 %, Yarn 19.82 %, Soil saver 0.78 % and Other traditional goods accounted with 7.03 % in 2012-13 to total export earnings of traditional jute goods.

It has found that the proportion of Hessian, CBC, Yarn and Other products had shown declining over time. As export of Sacking goods had shown positive growth during 2000-01 to 2012-13.

Pricing

The price is a major consideration especially in a today's competitive market. Jute products prices are generally depend on raw jute price every year. Moreover, prices followed in domestic and export market differs to a great extent. Generally, prices are fixed according to the cost-plus pricing policy. But, due to continuous decline in export market, shortage of raw materials, orientation towards domestic market, increase in production cost, competition from low-priced substitutes and entry of new competitors have adversely affected the price of jute products. Presently, government fixes the price considering different aspects of international market situation (Ahmed, 1992).

Jute goods prices are generally set by the interplay of the following factors (IJMA; NJB; JCI):

- *Quality of jute products:* Although quality is the subjective feature, it is determined by the quality raw jute production. Indian producers are not able to produce finest quality of raw jute compare to its competitors in world market.
- *Demand and Supply scenario:* Simply put, greater the demand, better the price realization. The demand in export market has shown huge decline. Consequently, supply plays a considerable role. Thus, when the production level declines because of adverse conditions and other situation, the price of products generally higher by its side. While demand has a secular growth rate, supply can vary on the basis of different conditions.
- *Production of raw jute:* Production of raw jute and raw jute price available at lower cost has a major impact on jute goods prices in India.

Being a government supported industry jute industries policy is all set by the concerned Governments authorities. Gunny Traders Association (GTA) set the prices of jute products in domestic market which is followed by both public and private sector jute industries. Gunny Traders Association had stopped publishing the Daily Price Bulletin w.e.f. 13th November, 2014 (IJMA).

5.3.15: Average Prices of Hessian and Sacking in Export and Domestic Market during 2000-01 to 2012-13

(Value in Rupees)

Year	Hessian		Sacking		
	Export Avg.	Domestic Avg.	Export Avg.	Domestic Avg.	
	Avg. Per 100 meter		Avg. Per 100 Bags	Avg. Per 100 Bags	Avg. Per M. Tonne
2000-2001	879.66	875.74	2302.99	2152.74	23989.73
2001-2002	990.55	987.43	2546.69	2358.19	26564.74
2002-2003	894.95	889.87	2202.10	2037.66	22840.66
2003-2004	900.46	888.57	2240.46	2089.65	23131.99
2004-2005	1049.70	1033.83	2501.34	2242.36	26265.09
2005-2006	1136.57	1129.34	2910.81	2715.59	30178.43
2006-2007	1184.25	1173.10	3020.41	2859.48	31787.76
2007-2008	1122.68	975.01	2756.94	2288.29	29109.21
2008-2009	1292.41	1123.99	3524.53	2862.79	35680.92
2009-2010	1757.79	1523.33	4435.36	3663.31	45646.59
2010-2011	1990.17	1721.21	5075.00	4167.95	52585.80
2011-2012	1894.90	1638.91	4989.80	4063.82	51329.62
2012-2013	2013.57	1743.12	5352.66	4345.72	55035.83

Source: Indian Jute Mill Association, Kolkata, India, Various Issues.

It is evident from the above table that, prices of jute products had shown a little increasing trend during the study period 2000-01 to 2012-13. In 2007-08, prices of products had declined, the average export price of Hessian has accounted for Rs. 1122.68/ 100 meter, average domestic price of Hessian has accounted for Rs. 975.01/ 100 meter, average export price of Sacking has accounted for Rs. 2756.94 / 100 bags, average domestic price of Sacking has accounted for 2288.29 / 100 bags and average domestic price of Sacking has counted for 29109.21/ M. Tonne. In the very next financial year 2008-09, prices increased in a good amount, the average export price of Hessian has accounted for Rs. 1292.41/ 100 meter, average domestic price of Hessian has accounted for Rs. 1123.99/ 100 meter, average export price of Sacking has accounted for Rs. 3524.53 / 100 bags, average domestic price of Sacking has accounted for Rs.2862.79 / 100 bags and average domestic price of Sacking has counted for Rs.35680.92/ M. Tonne.

Moreover, in financial year 2011-12 there is little decline in prices of jute products, but it has rose satisfactorily in the year 2012-13, the average export price of Hessian has accounted for Rs. 2013.57/ 100 meter, average domestic price of Hessian has accounted for Rs. 1743.12/ 100 meter, average export price of Sacking has accounted for Rs. 5352.66/ 100 bags, average domestic price of Sacking has accounted for Rs. 4345.72/ 100 bags and average domestic price of Sacking has counted for Rs. 55035.83/ M. Tonne.

Therefore, it is found that the prices of jute products had shown some positive increase, which may lead to help in growth of jute industry in coming future.

5.3.16: Minimum Support Price (MSP) of Raw Jute during 2000-01 to 2012-13

MSP (Assam TD 5)

Year	Rs./Qty	Rs./Tonne
2000-2001	785	7850
2001-2002	810	8100
2002-2003	850	8500
2003-2004	860	8600
2004-2005	890	8900
2005-2006	910	9100
2006-2007	1000	10000
2007-2008	1055	10550
2008-2009	1250	12500
2009-2010	1375	13750
2010-2011	1575	15750
2011-2012	1650	16500
2012-2013	2175	21750

Source: Indian Jute Mill Association, Kolkata, India, GOI, Various Issues.

It is clear from the above table that, during the study period 2000-01 to 2012-13 the MSP of raw jute has increased substantially in India. This upward trend in price of raw jute may continue because of higher demand for jute and jute products. The high price of raw jute leads to higher the cost of jute products. Because of high prices of jute products, industry losing the markets continuously, therefore the high prices of jute products is a matter of concern for the jute product manufacturers.

In order to avoid the situation in continuous hike in price of raw jute and jute products the jute industry may also think of a system of 'contract growing and buy-back policy' with the jute growers in their 'catchments area' which will not only ensure the remunerative price and assured market but also diffuse the present market condition and help to protect the interest of jute growers across the country (IJSG, 2011).

Distribution (Place)

Traditional jute products are marketed both in domestic as well as in export market. The main modes of marketing of jute products are mainly through government authorities, commission agents, and direct marketing. Traditional jute products are used in packaging of foodgrains, sugar, fertilizers, etc. Direct distribution is a common practice in case of distribution policy of jute industry. Indian jute industries has maintained separate distribution network for domestic and international market. The continuous fall in export market leads to bulk domestic consumption. The distribution in export market made through government authorities of NJMC and STC (State Trading Corporation) or their consortium. Presently many jute industries also have their separate shipping business firm to handle the export trade (Ahmed, 1992).

Because of government supported industry jute products are mainly sold in domestic market. To protect the industry from dilution government introduces JPM Act (Jute Packaging Mandatory Act) in 1987. The introduction of JPM Act bounds the sector viz., FCI, NAFED, and other state food procurement agencies to purchase and pack the finished products by jute made products. In domestic market, Directorate General of Supply and Disposal (DGS&D) makes the purchases on behalf of Government.

The Gunny Trades Association (GTA) is the largest association in Kolkata, which controls practically the whole gunny (jute) market. The main object of this association is to regulate the business in manufactured jute goods and to settle the matter of dispute relating to the trade. Simultaneously direct distribution is also done by the individual jute mills or through Calcutta Jute Fabric Shippers Association (CJFSA).

Promotional Activities

Promotion is perhaps the weakest link in the total marketing chain of Indian jute industry. Though most of jute industries look predominantly or solely towards domestic market, very little generic promotional activities can observe for boosting jute goods sales in domestic market. With penetration of giant substitute like synthetic one notices an observed shift of packaging market towards synthetic and other substitutes to jute in packaging market. With lower cost, lesser in weight, and different other qualities, the synthetic market is growing very fast across the world. “Jute products are eco-friendly and biodegradable” is hardly advertised through audio- visual media.

India’s biggest strength in the jute goods trade is its huge domestic market. India is the largest producer of raw jute, largest producer of jute goods and largest consumer of jute made products. Actually, consumption of jute goods has been growing faster after mid 1970’s. After independence export of jute goods has gone down, due to entry of other substitutes of packaging and emergence of Bangladesh as a major competitor in export market.

Jute traditional products are the most affordable material for packaging of foodgrains, fertilizers, sugar, cement, making cloths, etc. produced in India yet it is perceived as being old fashioned and less desirable than other substitute products. It is very hard to see advertisements on TV, radio or newspaper which speaks about the qualities of jute products.

The promotional policies of Indian jute industry have undergone a significant change over the last few decades. Till 1980’s Indian jute industry had an ensured widespread export market and it had adopted low profile promotional measures during that period. In 1986, Prime Minister Late Rajib Gandhi announced a packaging policy measure for long-term development and growth of jute industry consisted of the following: a) Jute Modernisation Fund Scheme (JMFS), b) Special Jute Development Fund (SJDF), c) duty free import of identical machinery items for modernisation of jute industry; d) mandatory use of jute packaging material. In 1987, Jute Manufacturing Development Council (JMDC) has been established with a view to re-establish the Indian jute sector through measures like market promotion, cost reduction, stream-lining production, research and development (R&D) etc.

Over the last few years government has launched few campaigns to promote jute which is suitable for both domestic and international markets. The Ministry of Textiles, GOI, introduced National Jute Board (NJB) Act in 2008 which is to be called as National Jute Board (NJB) particularly to look forward the matter of jute and jute products marketing and promotion. To promote jute NJB organises seminars, exhibition and export fairs within and outside the country, opening-up of jute product outlets and showrooms in different cities within and outside India, establishing liaison with importers and end users, financing research and development (R&D) projects, launching up of MSP (Minimum Support Price) by Jute Corporation of India (JCI) for raw jute, launching up of MEP (Minimum Export Price).

From the above analysis of objective it is found that domestic consumption of jute goods has measured lots of ups and downs. During the period it is observed that more than 90% of jute goods are produced in the form of traditional products, viz., hessian, sacking, CBC, yarn etc., it describes that till today Indian jute producers mainly dependent on primitive way of production. Due to high cost and lesser production of good quality hessian bags, yarn & twine, CBC and other traditional products have measured downwards trend during the study period. It is also found that Indian jute industry is heavily dependent on sacking goods during the period and it has shown positive growth, because of heavy demand of sacking other traditional products are declining from the market over the years. Chief erosion of India's share in world market is the emergence of Bangladesh as the major competitor of jute goods export.