

Chapter - 4

JUTE GOODS PRODUCTION AND MARKETING

Jute industry is the second most important textile industry in India after cotton. In its early stage it was an exported oriented industry and made rapid progress in the field of packaging market. Jute trade is mainly centred on West Bengal (India) and Bangladesh. India and Bangladesh are the major producers of jute products around the world (Goyal, 1990; Ministry of Textiles, 2007-08, 2008-09; Talukdar, 1987; Ahmed, 1992). Besides, two major jute goods producing countries India and Bangladesh, other countries like Brazil, China, Europe, Thailand, Nepal, etc. are also manufacturing jute products in small quantities. Jute goods production and marketing has undergone certain changes with the new demands that have emerged during the study period and it has been subject to various constraints, like cost of jute products, marketing constraints, etc. (Ghosh and Jethi, 2013; Goyal, 1990).

Manufacturing Process of Jute Goods

Jute goods production has undergone following steps to place in market as finished products:

Selection: In the selection process, raw jute bales are opened to find out any defect and to remove the defective portion from the jute plant by experienced workers. Raw jute bales are of two types i.e. 150 kg weight and 180 kg weight with or without top portion cutting. The bales are assorted according to end use like hessian weft, sacking wrap, sacking weft etc. After selection, jute bales are carried to softening section by workers called *Gariwala* and *Bajawala* (Tepcon India International Ltd.).

Softening: In softening process jute fibres are made soft and pile able. Two methods are used for softening; use of softening machine and use of jute good spreader. Generally an emulsion plant with jute softener machine is used to lubricate and soften the bark and gummy raw jute. The emulsion plant consists of gear pump, motor, vat, jet sprayer, nozzles, emulsion tank and the jacket. In this softening process jute becomes soft and pile able and suitable for carding (Tepcon India International Ltd.).

Piling and Pile Breaking: The main function of pile breaker is to break the pile and serve it to the carding machines. The softener machine output material is carried by pile men through bile to the pile place for piling. During piling superficial moisture penetrates inside fibre and "Thermofillic" action take place which softener the hard portion of the root. After piling for nearly 24 hours the pile breakers carry the material to the carding machine. Generally root cutting is done after piling near the hand feed breaker carding machine. The root weight varies from 5 to 7% of the total weight of jute (Tepcon India International Ltd.).

Carding: In this phase, the hard form of jute fibre is broken down sufficiently into an entangled mass and converted finally into a ribbon form. The weight of the fibre delivery then becomes uniform per unit of length. The carding is done by two types of machines: Breaker and Finisher (Ahmed, 1992).

Drawing and Doubling: The regular and uniform elongation of ribbon to make it lighter is called 'drawing' and the running of two or more ribbons at delivery is called 'doubling'. The straightening of the fibre into a continuous ribbon is called a 'sliver' (Ahmed, 1992).

Spinning, Reeling and Twisting: It is the final stage of yarn production where ribbons are converted into yarn of uniform thickness and strength which is ultimately used in weaving textile. Reeling consists mainly of winding the yarn on the circumference of a reel of definite size into 'skeins' and 'Hanks' of a definite continuous length. Making a thread of strong and compact form, single yarn are twisted, doubled, folded or plied together, and this process is named as 'twisting' (Ahmed, 1992).

Winding: Winding is a process which provides yarn as spools and cops for the requirement of beaming and weaving operations. There are two types of winding (Tepcon India International Ltd.):

- **Spool Winding:** In Spool Winding yarn is produced for warp (the longitudinal yarn). Spool winding machine consists of a number of spindles. There is wide variation in the number of spindles per machine from one make to another. Productivity of spool winding depends on the surface speed of the spindle and machine utilisation.

Spool winding machine uses the bobbins contain smaller length of yarn. This machine wound the yarn into bigger packages known as 'spool'. The Spool is used in making sheets of yarn to form warp portion used during interlacement of weaving.

- **Cop Winding:** Cop Winding machine obtains yarns from the spinning machines. The spinning bobbin is placed on a suitable pin on top of the cop machine and yarn tension is maintained by means of a small lever. The yarns on the bobbins are converted into hollow cylindrical package said to be cop. The cop is used to form Transverse thread during interlacement of weaving. Generally a cop winding machines consist 120 spindles.

Beaming: Beaming process is follows after spool winding. In Beaming operation yarn from spool is wound over a beam of proper width and correct number of ends to weave jute cloth. To increase the quality of woven cloth and weaving efficiency, the warp yarns are coated with starch paste. Adequate moisture is essential in this process (Tepcon India International Ltd.).

Weaving: Weaving is a process of interlacements of two series of threads called, 'warp' and 'weft' yarns to produce the fabric of desired quality. There are separate looms for hessian and sacking in weaving section. The Hessian looms, shuttle which contains cops (weft yarn) is manually changed. The sacking looms are equipped with eco-loader to load a cop automatically into the shuttle (Tepcon India International Ltd.).

Dumping: In is the process the rolled woven cloth is unrolled and water is sprinkled on it continuously to provide desired moisture. Each roll is generally 104 yards or 95.976 meters. Dumping is done manually (Tepcon India International Ltd.).

Calendaring: This process is very much similar to ironing of fabric. After dampening the dampened fabric passes through pairs of heavy rollers rendering threads in fabric flattened and improve the quality and appearance (Tepcon India International Ltd.).

Lapping: This is the process in which Hessian fabrics are folded into the required size used in "Bale press" operation on the lapping machine (Tepcon India International Ltd.).

Hemming: In Hemming process, the raw edges of sacking cloth cut pieces are shown by folding it with sewing machine (Tepcon India International Ltd.).

Herackele Sewing: In Herackele sewing the sides of sacking cloth cut pieces are shown to make a complete bag (Tepcon India International Ltd.).

Bailing: Bags or Bale processing cloths are pressed compactly according to buyers need (Tepcon India International Ltd.).

4.1 Jute Goods Production in India

The production of jute goods presented no definite trend. This is being in accordance with the availability and quality of raw jute production, which itself is fluctuated every year. Jute goods production was broadly practised by the natives of India long back before the British period for use of clothing, matting, ropes, etc.

After the inception of first jute mill in the year 1855 in Calcutta now Kolkata (West Bengal) the industry has grown rapidly and superseded Dundee industry by 1918 and became the leading jute manufacturing center of the world and start enjoying monopoly in packaging globally. The industry faced a great setback after partition in 1947 because most of the raw jute cultivation area went to Bangladesh. Consequently, many jute mills in India had closed in between 1950 to 1980 because of shortage of raw materials (Goyal, 1990; Das, 1995).

India is the leading jute goods producing country in the world, accounting for about 70% of estimated world production. Bulk of the manufactured jute goods is

predominantly being used in packaging purposes in domestic market (Ministry of Textiles, 2015). In recent years production of jute goods in India has been fluctuating from year to year largely because of the change in demand pattern in domestic and international markets.

The following table represents the trend and pattern of production of jute made goods in India from 2000-01 to 2012-13.

Table 4.1.1: Trend and Pattern of Jute Goods Production in India during 2000-01 to 2012-13

Year	Quantity (in 000'M.Tonnes)	AGR (%)
2000-2001	1624.90	--
2001-2002	1600.80	-1.48
2002-2003	1621.80	1.31
2003-2004	1571.30	-3.11
2004-2005	1613.10	2.66
2005-2006	1582.20	-1.92
2006-2007	1356.30	-14.28
2007-2008	1776.00	30.94
2008-2009	1633.70	-8.01
2009-2010	1323.30	-19.00
2010-2011	1565.70	18.32
2011-2012	1582.40	1.07
2012-2013	1591.30	0.56
CAGR	-0.16	--

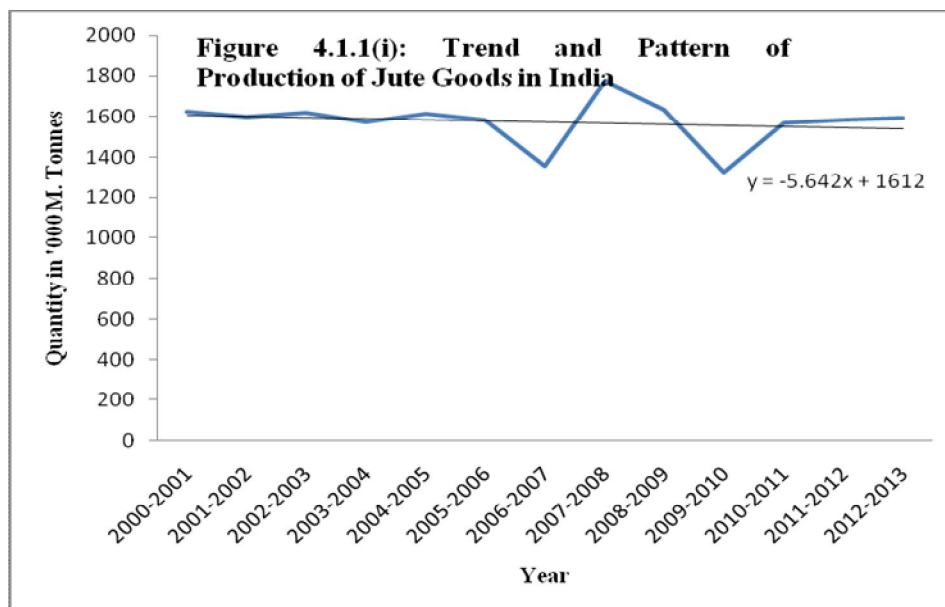
Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

Descriptive Statistics of Table 4.1.1

Mean	1572.52
Standard Deviation	116.27
Minimum	1323.30
Maximum	1776.00

Note: Calculated.

The trend and pattern of Indian jute goods production 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 4.1.1 that the jute goods production in India has shown a negative trend during the study period 2000-01 to 2012-13. A Compound Annual Growth Rate (CAGR) of (-) 0.16 percent can be observed over the period, 2000-01 to 2012-13. That clearly shows that jute goods production in India has declining trend over the years. Indeed, during the study period 2000-01 to 2012-13, jute goods production in India shows declining trend but it has also recovered. In the financial year 2000-01, the total jute goods production was 1624.90 Th. M. Tonnes; production has decreased slightly in the year 2001-2002 to 1600.80 Th. M. Tonnes and shows AGR (-)1.48 during the financial year. In financial years 2006-07 and 2009-10, [1356.30 Th. M.Tonnes, AGR of (-) 14.28] [1323.30 Th. M.Tonnes, AGR of (-) 19.00] respectively showing huge decline in production of jute goods in India.

Moreover, it is observed that average production of jute goods in India was 1572.52 Th. M.Tonnes during the study period having a S.D. 116.27 (i.e., fluctuation from the average value during the study period). The highest and the lowest production of jute goods are 1776.00 Th. M.Tonnes in 2007-08 and 1323.30 Th. M.Tonnes in 2009-10 respectively.

The production trend of jute goods clearly indicates that Indian jute industry is gradually declining during the study period 2000-01 to 2012-13.

4.2 Trend and Pattern of Domestic Consumption of Jute Goods

Domestic consumption of jute products has accounted more than 90 per cent of total jute goods production in India. Between 2000-01 and 2012-13, domestic consumption as per cent of total jute goods production in India decreased from 92.84 percent to 78.41 percent. The decline in domestic consumption to a large extent was the consequence of the steady increase in other packaging substitutes in Indian market. After, liberalisation and privatisation the entry of other substitute's products viz., synthetics, plastic, etc. in the field of packaging market has forced down the consumption of jute goods from packaging of foodgrains and other products. India is the major producer of jute products in the world primarily due to its vast domestic market. Average domestic consumption out of total production has been around 90% (Ministry of Textiles, 2015).

The following table represents the trend and pattern of domestic consumption jute made goods in India from 2000-01 to 2012-13.

Table 4.2.1: Domestic Consumption of Jute Goods during 2000-01 to 2012-13

Year	Quantity (in 000'M.Tonnes)	AGR (%)
2000-2001	1435.10	--
2001-2002	1460.80	1.79
2002-2003	1374.80	-5.89
2003-2004	1343.00	-2.31
2004-2005	1393.80	3.78
2005-2006	1377.20	-1.19
2006-2007	1216.50	-11.67
2007-2008	1543.20	26.86
2008-2009	1465.70	-5.02
2009-2010	1206.30	-17.70
2010-2011	1351.20	12.01
2011-2012	1382.60	2.32
2012-2013	1398.70	1.16
CAGR	-0.20	--

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

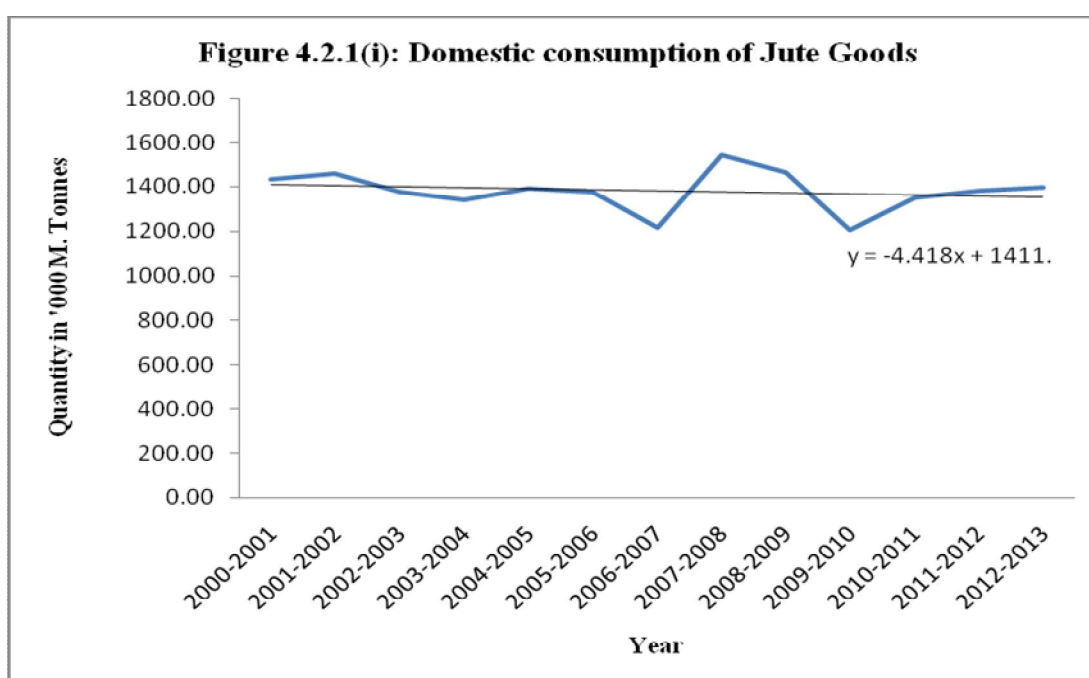
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

Descriptive Statistics of Table: 4.2.1

Mean	1380.68
Standard Deviation	92.75
Minimum	1206.30
Maximum	1543.20

Note: Calculated.

The trend and pattern of domestic consumption 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 found from the above table that the domestic consumption of jute goods in India has shown erratic trend during the study period 2000-01 to 2012-13. A Compound Annual Growth Rate (CAGR) of (-) 0.20 percent can be observed over the period, 2000-01 to 2012-13. That clearly shows that domestic consumption of jute goods in India has shown declining trend over the years. In the financial year 2000-01, domestic consumption jute goods were 1435.10 Th. M. Tonnes; domestic consumption has increased slightly in the year 2001-2002 to 1460.80 Th. M. Tonnes and shows AGR 1.79 during the financial year. In financial years 2006-07 and 2009-10, [1216.50 Th. M.Tonnes, AGR of (-) 11.67] and [1206.30 Th. M.Tonnes, AGR of (-) 17.70] respectively showing huge decline in domestic consumption of jute goods.

Moreover, it is observed that average domestic consumption of jute goods was 1380.68 Th. M.Tonnes during the study period; having a S.D. of 92.75 (i.e., fluctuation from the average value during the study period); highest and least domestic consumption of 1543.20 Th. M.Tonnes, 1206.30 Th. M.Tonnes respectively.

The internal consumption of jute goods has gone downwards severely particularly during the study period 2000-01 to 2012-13. Decrease in demand has occurred mainly because of higher cost of jute goods, lesser availability of products, etc. the average annual growth rate of jute goods consumption significantly declined during the study period.

Table 4.2.2: Sector Wise Consumption of Jute Goods in Last Five Years

Quantity: in 000'M.Tonnes

Year	Foodgrains	Sugar
2008-09	820.00	123.00
2009-10	757.00	95.00
2010-11	899.00	99.20
2011-12	953.00	104.00
2012-13	1059.00	92.40

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

As may be seen in the above mentioned table, amongst the major jute goods consuming sector foodgrains had the highest total consumption of jute goods in last five years followed by sugar industry. In 2008-09 foodgrains sector consumed 820.00 Th. M.Tonnes followed by 123.00 Th. M.Tonnes by sugar industries. Moreover in 2012-13 it is seen that consumption has increased in foodgrains sector with 1059.00 Th. M.Tonnes and declined in consumption of jute goods by sugar industries accounted with 92.40 Th. M.Tonnes.

4.3 Trend and Pattern of Export of Jute Goods

The export market has been declining year after year and making a threat to the jute industry due to entry of synthetics in packaging market in 1960's. The Internal market was also threatened due to in discriminate growth of import oriented synthetics packaging industry in India since 1980's (Goyal, 1990). The Government and the industry circles have expressed its concern at the declining trend in the export of jute goods in the recent years. The government has announced to check this trend

by some short-term and long-term measures, due to pressure created by the industry circle, trade union organisations, jute growers' organisation etc. Both the government and the industry will have to make joint efforts to revive the industry as a vital industry in foreign trade (Das, 1995).

The entry of synthetic as packing material, an alternative to jute had jolted the jute industry in India further. This led to a rapid decline in the export of jute and jute products. From 70% the export of goods declined to 30%. The jute industry started to shrink. Seeing this, the government of India in 1987 declared the Mandatory Jute Packaging Act (PJMA) 1987. Government imposed the use of jute for packing traditional material like food grains and sugar (Smriti Chand Industries, n.d).

The following table represents the trend and pattern of export jute made goods from India during 2000-01 to 2012-13.

Table 4.3.1: Export of Jute Goods from India during 2000-01 to 2012-13

Year	Quantity (in 000'M.Tonnes)	AGR (%)
2000-2001	187.00	--
2001-2002	148.20	-20.75
2002-2003	226.00	52.50
2003-2004	310.40	37.35
2004-2005	321.80	3.67
2005-2006	285.80	-11.19
2006-2007	242.80	-15.05
2007-2008	149.50	-38.43
2008-2009	162.30	8.56
2009-2010	83.80	-48.37
2010-2011	175.50	109.43
2011-2012	211.80	20.68
2012-2013	185.40	-12.46
CAGR	-0.07	--

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

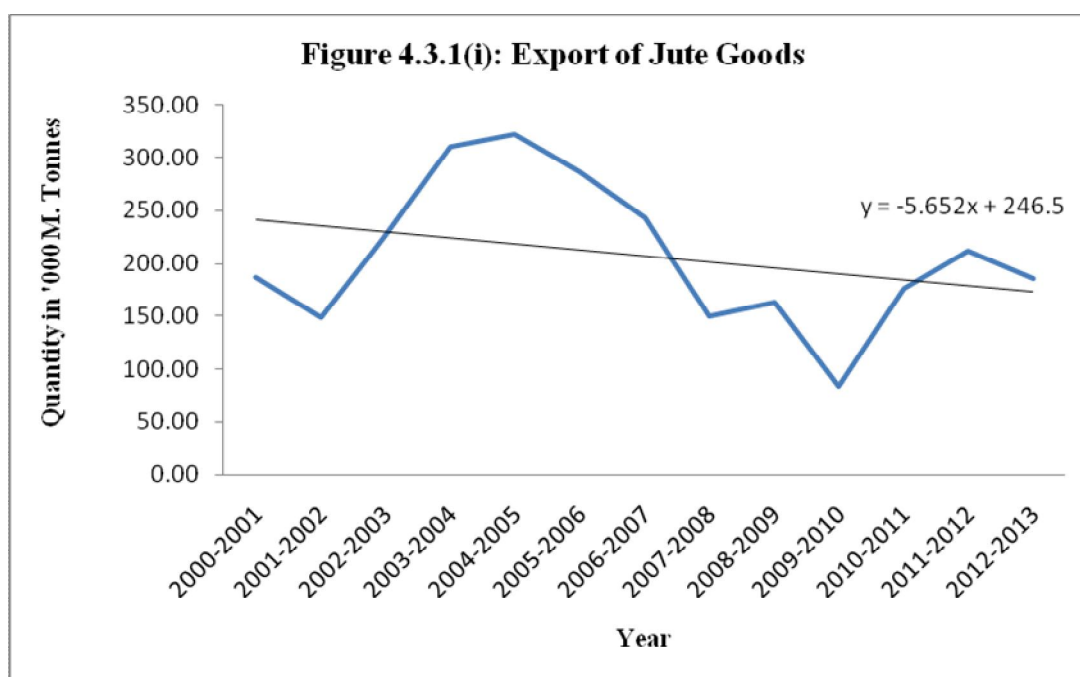
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

Descriptive Statistics of Table: 4.3.1

Mean	206.95
Standard Deviation	69.25
Minimum	83.80
Maximum	321.80

Note: Calculated.

The trend and pattern of export of jute goods from India during the study period 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.

The above table depicted that the export of jute goods in India has shown fluctuating trend during the study period 2000-01 to 2012-13. A Compound Annual Growth Rate (CAGR) of (-) 0.07 percent can be observed over the period, 2000-01 to 2012-13. In the financial year 2000-01, total export of jute goods were 187.00 Th. M. Tonnes; export has decreased in the very next year 2001-2002 having total export of 148.20 Th. M. Tonnes and showing AGR -20.75 during the financial year. Indeed, in the financial year 2002-03 export has shown huge growth with an AGR of 52.50. In the financial year 2009-10, export has shown huge decline with [83.80 Th. M. Tonnes, AGR of (-) 48.37] respectively. In the very next year 2010-2011 total export of jute goods has increased with an AGR of 109.43; by 2012-13, export of jute goods from India have evident lots ups and downs.

Moreover, it is observed that average export of jute goods was 206.95 Th. M.Tonnes during the study period; having a S.D. of 69.25 (i.e., fluctuation from the average value during the study period). The highest and lowest export of jute goods accounted with 321.80 Th. M.Tonnes, 83.80 Th. M.Tonnes respectively.

The following table represents the trend and pattern of export value jute made goods from India during 2000-01 to 2012-13.

Table 4.3.2: Value of Export of Jute Goods from India during 2000-01 to 2012-13

Year	Amount (in Rs. Crores)	AGR (%)
2000-2001	691.22	--
2001-2002	613.32	-11.27
2002-2003	913.32	48.91
2003-2004	1051.88	15.17
2004-2005	1146.90	9.03
2005-2006	1186.25	3.43
2006-2007	1055.16	-11.05
2007-2008	521.52	-50.57
2008-2009	612.90	17.52
2009-2010	387.06	-36.85
2010-2011	1033.45	167.00
2011-2012	1203.26	16.43
2012-2013	1116.03	-7.25
CAGR	3.75	--

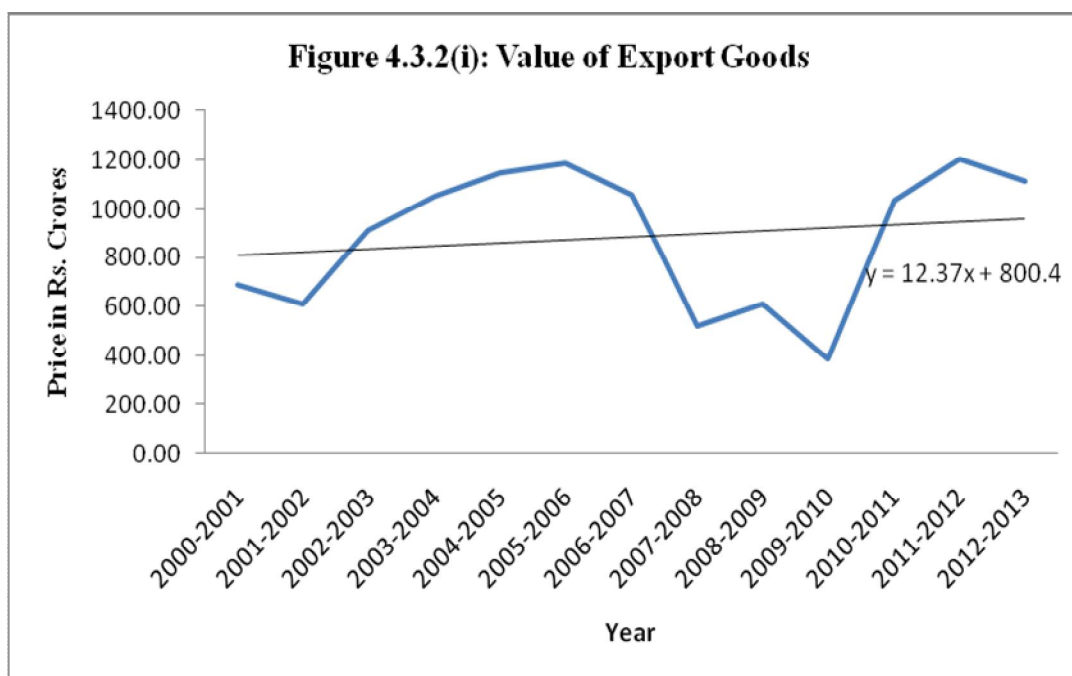
Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

Descriptive Statistics of Table: 4.3.2

Mean	887.10
Standard Deviation	282.70
Minimum	387.06
Maximum	1203.26

Note: Calculated.

The trend and pattern of export value of jute goods from India during the study period 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.

The above table analysing that the value of export earnings has shown growing trend during the study period. A Compound Annual Growth Rate (CAGR) of 3.75 percent can be observed over the period, 2000-01 to 2012-13. In the financial year 2000-01, export value of jute goods were 691.22 Rs. Crores; export has decreased in the very next year similarly value of exports also decreases to 613.32 Rs. Crores in 2001-02 with AGR -11.27 during the financial year. Indeed, in the financial year 2002-03 export has shown huge growth similarly value also increases with an AGR of 48.91. In the financial year 2009-10, export has shown huge decline naturally value also decreases very effectively, in the very next year 2010-2011 total export of jute goods has increased similarly value of export of jute goods has also increased to 1033.45 Rs. Corers, value export of jute goods from India has shown minor ups and downs.

Likewise, it is also observed that the average value of export earnings was 887.10 Rs. Crores during the study period 2000-01 to 2012-13; having a S.D. of 69.25

(i.e., fluctuation from the average value during the study period); with maximum and least amount of export earnings 1203.26 Rs. Crores in 2011-12 and 387.06 Rs. Crores in 2009-10 respectively during of 2000-01 to 2012-13.

The following table represents the price realisation of exports of jute goods during 2000-01 to 2012-13.

Table 4.3.3: Price Realisation of Exports during 2000-01 to 2012-13

Year	Quantity (in 000' M. Tonnes)	Value (in Rs. Crores)	Average Price Realisation (Rs. Crores per M.Tonnes)
2000-2001	187.00	691.22	3.70
2001-2002	148.20	613.32	4.14
2002-2003	226.00	913.32	4.04
2003-2004	310.40	1051.88	3.39
2004-2005	321.80	1146.90	3.56
2005-2006	285.80	1186.25	4.15
2006-2007	242.80	1055.16	4.35
2007-2008	149.50	521.52	3.49
2008-2009	162.30	612.90	3.78
2009-2010	83.80	387.06	4.62
2010-2011	175.50	1033.45	5.89
2011-2012	211.80	1203.26	5.68
2012-2013	185.40	1116.03	6.02

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

As it may be seen from the table, the picture with regard to jute goods exports from India seems somewhat less impressive. Although the value of jute exports as well as price realisation per metric tonne registered significant rise over the years, the quantity of jute goods exported from India (column 2 in the table) show an erratic trend with ups and downs over the entire period. While the quantity of jute goods exported in 2000-01 was 187.00 Th. M. tonnes, the same came down to a level of 185.40 Th. M. tonnes in 2012-13.

The following table represents the proportion of exports of jute goods to total production during 2000-01 to 2012-13.

Table 4.3.4: Proportion of Export to Total Production during 2000-01 to 2012-13

Year	Share (%)
2000-2001	11.51
2001-2002	9.26
2002-2003	13.94
2003-2004	19.75
2004-2005	19.95
2005-2006	18.06
2006-2007	17.90
2007-2008	8.42
2008-2009	9.93
2009-2010	6.33
2010-2011	11.21
2011-2012	13.38
2012-2013	11.65

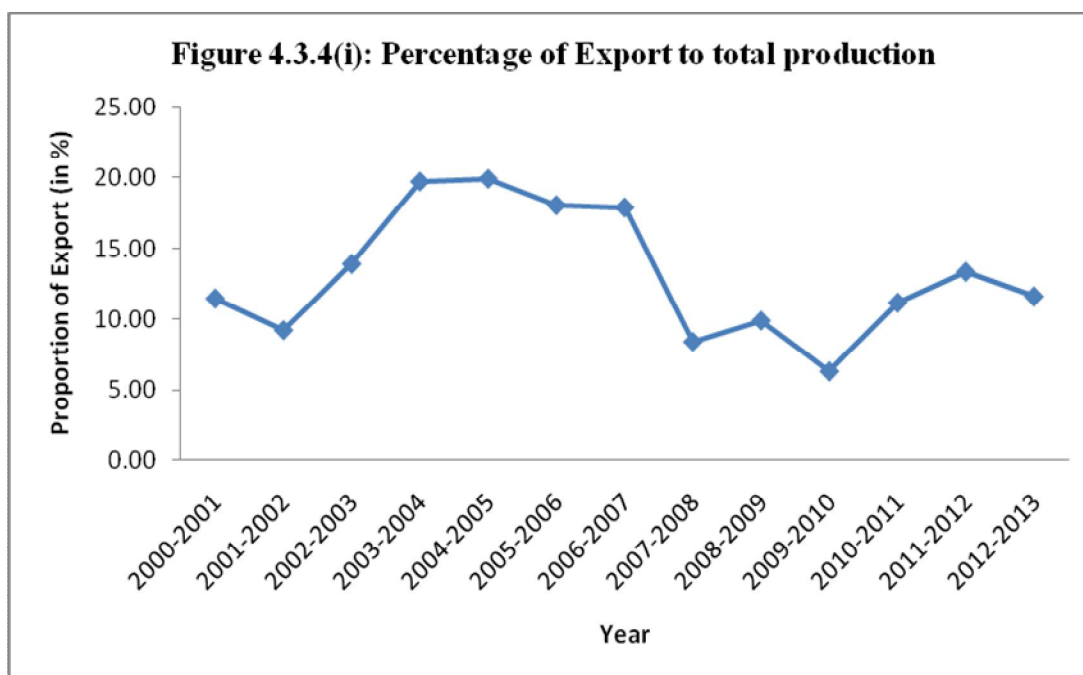
Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

Note: Calculated.

From the above table it was clear that export proportion over total production has shown major ups and downs during 2000-01 to 2012-13. In 2000-01 11.51 percent of export measured to total production of jute goods, in the very next financial year 2001-02 it has dropped to 9.26 percent. Export's proportion was very close to 20 percent of total production of jute goods in 2004-2005 and further plunged to 11.65 percent in 2012-13.

While undoubtedly there were several uncontrollable factors at work that contributed to the progressive decline of export's proportion to total production of jute goods.

The proportion of total export to total production of jute goods from India during the study period 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.

World Trade of Jute Products

The demand of jute goods had shown declining trend in international market over the years. The countries like Brazil, Australia, and Argentina were considered as major markets for Indian jute products were leaning over the years. On the other hand, countries like Japan, Germany, and Italy have increased their off takes in recent years. The USA has been the leading traditional open market for Indian jute products and the world's third largest consumer of jute goods after India and China (Gupta, 1985).

Europe and Africa has been the major purchaser of jute goods over the years and progressively become the important promising markets for Indian jute products.

The following table represents the India's proportion of export to World and Developing Countries during 2000-01 to 2012-13.

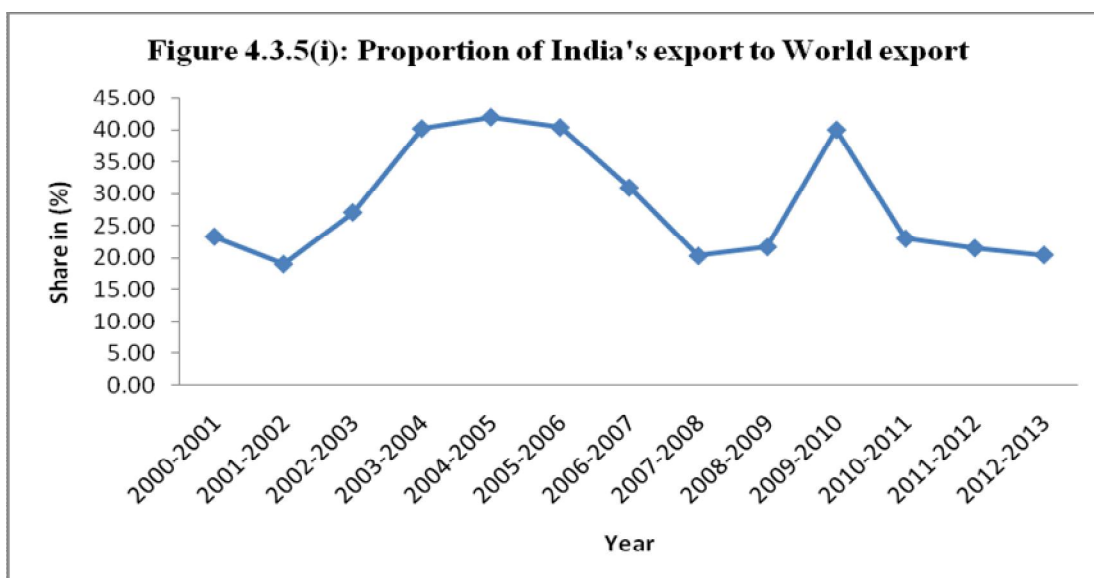
Table 4.3.5: India's Share of Export of Jute Goods in World and Developing Countries during 2000-01 to 2012-13

Year	Proportion of India's Export to World Export	Proportion of India's Export to Export of developing countries
2000-2001	23.37	25.24
2001-2002	19.14	20.32
2002-2003	27.14	28.70
2003-2004	40.16	41.52
2004-2005	41.92	43.24
2005-2006	40.33	41.91
2006-2007	30.99	32.06
2007-2008	20.40	21.24
2008-2009	21.76	22.66
2009-2010	39.96	12.27
2010-2011	23.07	23.90
2011-2012	21.60	22.10
2012-2013	20.55	21.00

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

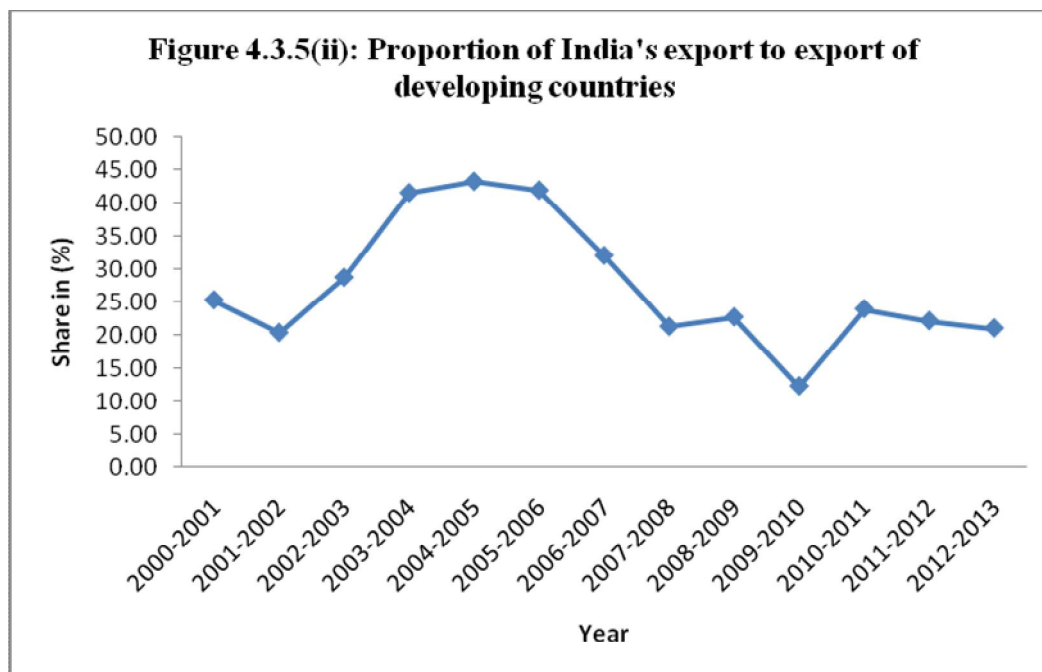
Note: Calculated

The proportion of India's export to world during the study period 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.

The proportion of India's export to developing countries during the study period 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, it was clear that India's share was 23.37 percent to world and 25.24 percent to developing countries in 2000-01. Further the share has come down to 20.55 percent to world and 21.00 percent to developing countries in 2012-13.

While undoubtedly there were many uncontrollable factors at work that contributed to the progressive decline of India's share, the figure cited in the above mentioned Table 4.3.5 was to a large measure reflective of the poor marketing efforts by the Indian jute industry.

Jute Market Scenario in Major Jute Products Importing Countries

India was the market leader of jute products in export of jute goods in different parts of world till 1950's. After partition Bangladesh grabs the top rank in export market in both jute products as well as in raw jute export, still Indian jute industry grabs the second rank in export of jute goods in global market. In 2001-02 India had 23.37 per cent share in world export of jute goods and 25.24 per cent share in export of jute goods to developing countries. Further, export share has come down in world

market by 20.55 percent in world market and 21.00 percent in developing countries respectively. Compared to this Bangladesh is the leader in export of jute goods with more than 70 per cent of export globally.

Export of Jute goods to Different Countries

Indian jute industry is known for its export market from its inception. Since last two or three decades Indian jute has lost the market to top rival Bangladesh and to the other substitutes of packaging, which are easily available in the market at lower cost. Still, Indian jute industry is prominent enough to capture some market. The following are some top markets for Indian jute products globally:-

Table 4.3.6: U.S.A. Market Scenario

Value: Rs. Crores

Year	Hessian	Sacking	Yarn	JDPs	Others	Total
2008-09	76.44	2.14	0.77	82.24	15.42	177.01
2009-10	48.04	5.74	0.77	83.96	10.10	148.61
2010-11	115.30	2.92	2.03	99.00	13.02	232.27
2011-12	134.58	1.48	3.32	106.81	22.62	268.81
2012-13	150.73	0.69	2.22	153.01	30.93	377.58

Source: Indian Jute, National Jute Board, Kolkata, India, Various Issues.

As it is clearly evident from the above table, U.S.A. is one of the major importers of Indian jute products. In 2008-09, total amount of Rs. 177.01 Crores jute goods has exported to U.S.A. It shows sharp decline and accounted for Rs. 148.61 Crores in 2009-2010. Moreover, from 2010-11 export has continuously increased at a reasonable rate and accounted for Rs.232.27 Crores, Rs.268.81 Crores, and Rs.377.58 Crores respectively in 2010-11, 2011-12, and 2012-13.

Table 4.3.7: Belgium Market Scenario

Value: Rs. Crores

Year	Hessian	Sacking	Yarn	JDPs	Others	Total
2008-09	6.70	0.22	42.65	4.00	1.31	54.88
2009-10	3.45	0.09	35.37	3.22	0.88	43.01
2010-11	8.42	0.41	80.75	3.17	8.46	101.21
2011-12	8.42	0.64	36.75	2.42	2.93	51.16
2012-13	7.93	0.23	34.11	2.70	1.73	46.70

Source: Indian Jute, National Jute Board, Kolkata, India, Various Issues.

It is clearly seen from the above table, Belgium market had declined in recent past. In 2008-09, total amount of Rs. 54.88 Crores jute goods has exported to Belgium. It shows sharp decline and accounted for Rs. 43.01 Crores in 2009-2010. In financial year 2010-11, the market has rose satisfactorily and accounted for Rs. 101.21 Crores. Moreover, in 2011-12 and 2012-13 there was sharp decline in the market and accounted for Rs.51.16 Crores and Rs.46.70 Crores respectively.

Table 4.3.8: U.K. Market Scenario

Value: Rs. Crores

Year	Hessian	Sacking	Yarn	JDPs	Others	Total
2008-09	17.31	1.08	2.13	98.23	13.87	132.62
2009-10	18.41	0.36	1.37	49.52	7.40	77.06
2010-11	30.38	0.13	2.71	57.89	10.89	102.00
2011-12	30.06	0.39	2.01	75.37	11.60	119.43
2012-13	28.49	0.59	1.45	71.07	8.49	110.09

Source: Indian Jute, National Jute Board, Kolkata, India, Various Issues.

It is clearly seen from the above table, U.K. market had fluctuated in past few years. In 2008-09, total amount of Rs. 132.62 Crores jute goods has exported to U.K. It shows sharp decline and accounted for Rs. 77.06 Crores in 2009-2010. After huge fall in last financial year the market has rose satisfactorily and accounted for Rs. 102.00 Crores 2010-11 and 119.43 Corers 2012-13. Moreover, in 2012-13 there was sharp decline in the market and accounted for Rs. 110.09 Crores.

Table 4.3.9: Turkey Market Scenario

Value: Rs. Crores

Year	Hessian	Sacking	Yarn	JDPs	Others	Total
2008-09	11.35	10.01	38.63	0.53	0.09	60.61
2009-10	5.12	3.35	26.13	0.22	0.01	34.83
2010-11	15.42	11.16	137.82	0.70	0.18	165.28
2011-12	22.15	3.17	51.55	0.38	0.02	77.27
2012-13	20.49	9.82	33.26	0.72	0.05	64.14

Source: Indian Jute, National Jute Board, Kolkata, India, Various Issues.

It is clearly seen from the above table, Turkey market had fluctuated in past few years. In 2008-09, total amount of Rs. 60.61 Crores jute goods has exported to

Turkey. It shows sharp decline and accounted for Rs. 34.83 Crores in 2009-2010. After huge fall in last financial year the market has rose satisfactorily and accounted for Rs. 165.28 Crores 2010-11. Moreover, in 2011-12 and 2012-13 there was sharp decline in the market and accounted for Rs. 77.27 Crores and Rs. 64.14 Crores.

Table 4.3.10: Egypt Market Scenario

Value: Rs. Crores

Year	Hessian	Sacking	Yarn	JDPs	Others	Total
2008-09	25.25	11.62	28.58	0.05	0.00	65.50
2009-10	13.65	8.22	11.94	0.10	0.02	33.93
2010-11	37.98	14.12	86.50	0.23	0.01	138.39
2011-12	46.99	6.04	22.78	0.09	0.45	76.35
2012-13	26.41	14.92	18.96	0.22	0.47	60.76

Source: Indian Jute, National Jute Board, Kolkata, India, Various Issues.

It is evident from the above table, Egypt market had fluctuated in past few years. In 2008-09, total amount of Rs. 65.50 Crores jute goods has exported to Egypt. It shows sharp decline and accounted for Rs. 33.93 Crores in 2009-2010. After huge fall in last financial year the market has rose satisfactorily and accounted for Rs. 138.29 Crores 2010-11. Moreover, in 2011-12 and 2012-13 there was sharp decline in the market and accounted for Rs. 76.35 Crores and Rs. 60.76 Crores respectively.

Table 4.3.11: Japan Market Scenario

Value: Rs. Crores

Year	Hessian	Sacking	Yarn	JDPs	Others	Total
2008-09	11.47	0.83	1.50	2.07	0.82	16.69
2009-10	4.55	0.39	0.79	2.22	1.68	9.63
2010-11	14.98	1.18	6.14	2.12	0.48	24.90
2011-12	13.35	0.82	3.41	3.57	1.01	22.16
2012-13	11.27	1.97	4.15	7.26	1.87	26.52

Source: Indian Jute, National Jute Board, Kolkata, India, Various Issues.

It is evident from the above table; Japanese market had showed upward trend in past few years. In 2008-09, total amount of Rs. 16.69 Crores jute goods has exported to Japan. It shows sharp decline and accounted for Rs. 9.63 Crores in 2009-2010. After huge fall in last financial year the market has rose satisfactorily and

accounted for Rs. 24.90 Crores 2010-11. Moreover, in 2011-12 and 2012-13 export accounted for Rs. 22.16 Crores and Rs. 26.52 Crores respectively.

Table 4.3.12: Saudi Arab Market Scenario

Value: Rs. Crores

Year	Hessian	Sacking	Yarn	JDPs	Others	Total
2008-09	11.13	1.31	35.40	7.45	6.39	61.68
2009-10	7.35	2.86	28.84	5.53	5.97	50.55
2010-11	30.50	1.90	70.90	7.46	15.52	126.28
2011-12	31.30	2.61	47.36	6.88	8.54	96.69
2012-13	29.12	2.31	53.74	10.50	7.87	103.54

Source: Indian Jute, National Jute Board, Kolkata, India, Various Issues.

As it is clearly evident from the above table, Saudi Arabia is one of the major importers of Indian jute products. In 2008-09, total amount of Rs. 61.68 Crores jute goods has exported to Saudi Arabia. It shows sharp decline and accounted for Rs. 50.55 Crores in 2009-2010. Moreover, from 2010-11 export increased to Rs. 126.28 Crores. In 2011-12 and 2012-13, export accounted at a reasonable amount for Rs. 96.69 Crores, Rs. 103.54 Crores respectively.

Table 4.3.13: Spain Market Scenario

Value: Rs. Crores

Year	Hessian	Sacking	Yarn	JDPs	Others	Total
2008-09	2.45	0.15	0.10	7.18	1.45	11.33
2009-10	2.51	0.11	0.08	6.94	3.99	13.63
2010-11	5.15	0.34	0.25	4.78	0.55	11.07
2011-12	6.50	1.06	0.15	5.41	4.05	17.17
2012-13	7.24	2.34	0.49	5.56	0.88	16.52

Source: Indian Jute, National Jute Board, Kolkata, India, Various Issues.

It is clearly seen from the above table, export of jute products to Spain had fluctuated in recent past years. In 2008-09 export valued Rs. 11.33 Crores and in 2012-13 Rs. 16.52 Crores. It shows that export to Spain has shown some hope for the industry in near future.

Table 4.3.14: Germany Market Scenario

Value: Rs. Crores

Year	Hessian	Sacking	Yarn	JDPs	Others	Total
2008-09	39.55	1.09	0.08	5.37	6.65	52.74
2009-10	34.15	0.36	0.90	6.74	3.38	45.53
2010-11	66.19	0.14	1.21	6.15	6.59	80.28
2011-12	74.04	0.45	1.58	8.01	5.98	90.06
2012-13	60.10	0.07	0.99	10.15	5.94	77.20

Source: Indian Jute, National Jute Board, Kolkata, India, Various Issues.

As it is clearly evident from the above table, Germany is one of the reliable importers of Indian jute products. In 2008-09, total amount of Rs. 52.74 Crores jute goods has exported to Saudi Arabia. It shows sharp decline and accounted for Rs. 45.53 Crores in 2009-2010. Moreover, from 2010-11 and 2011-12 export increased to Rs. 80.28 Crores and Rs. 90.06 Crores respectively. In 2012-13, export had declined and valued Rs. 77.20 Crores.

Table 4.3.15: Italy Market Scenario

Value: Rs. Crores

Year	Hessian	Sacking	Yarn	JDPs	Others	Total
2008-09	10.56	0.24	1.92	8.63	2.13	23.48
2009-10	10.32	0.23	0.71	6.64	1.25	19.15
2010-11	11.99	0.11	3.77	8.73	1.19	25.79
2011-12	16.36	0.26	1.35	9.42	2.58	29.97
2012-13	21.40	0.06	2.73	6.82	1.25	32.26

Source: Indian Jute, National Jute Board, Kolkata, India, Various Issues.

It is clearly seen from the above table, export of jute products to Italy had showed some positivity in recent past years. In 2008-09 export valued Rs. 23.48 Crores and in 2012-13 Rs. 32.26 Crores. It shows that export to Italy has shown some hope for the industry in future.

4.4 Trend and Pattern of Import

India's production of jute goods always falls short of the requirements and therefore it is imported from neighbour country Bangladesh to feed the demand of domestic consumers. After 2001-02, import of jute goods has increased significantly.

Import of Raw Jute in 2008-09 has dropped by 66% in quantity and by 55% in value terms, whereas import of jute products saw a surge by 23% in quantity and by 47% in value terms when compared with the figures of 2007-08. The EXIM Policy states that import of raw jute and jute products in India should be considered as free items without duty (Business Maps of India, n.d).

The following table represents the total imports during 2000-01 to 2012-13:

Table 4.4.1: Total Import of Jute Goods during 2000-01 to 2012-13

Year	Jute products (in 000'M.Tonnes)	AGR (%)
2000-2001	102.73	--
2001-2002	86.52	-15.78
2002-2003	141.14	63.13
2003-2004	117.64	-16.65
2004-2005	118.15	0.43
2005-2006	213.24	80.48
2006-2007	155.29	-27.18
2007-2008	229.49	47.78
2008-2009	129.98	-43.36
2009-2010	195.68	50.55
2010-2011	174.27	-10.94
2011-2012	301.14	72.80
2012-2013	301.96	0.27
CAGR	8.65	

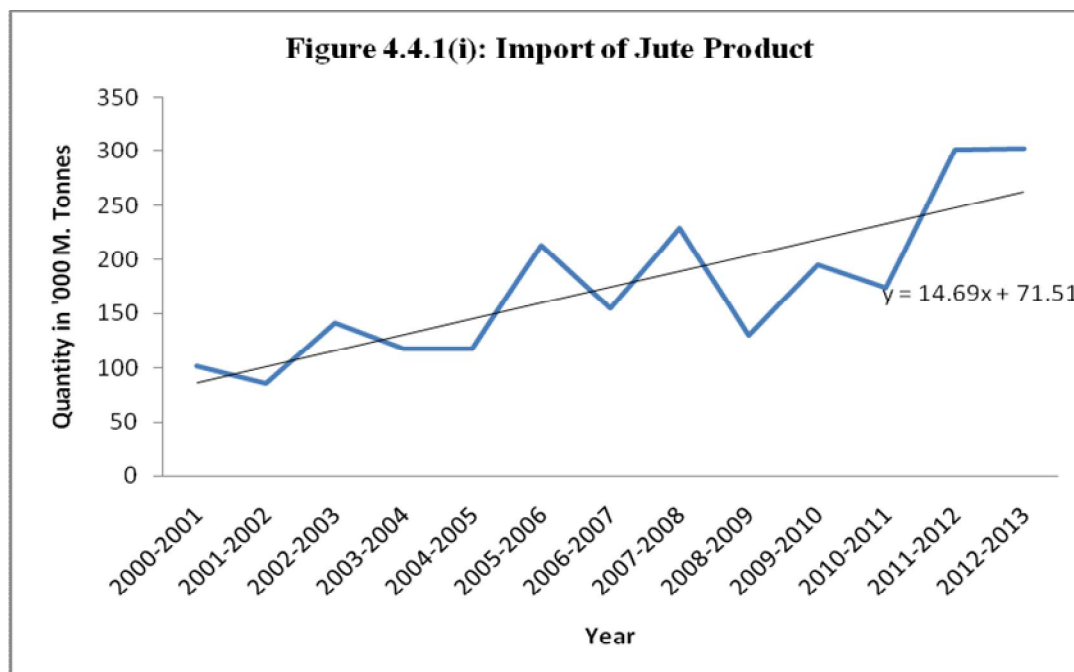
Source: National Jute Board, Annual Report, Kolkata, India, Various Issues
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues

Descriptive Statistics of Table: 4.4.1

Mean	174.40
Standard Deviation	70.72
Minimum	86.52
Maximum	301.96

Note: Calculated

The trend and pattern of import of 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 evident from the above table that the import of jute goods has shown a positive trend during the study period 2000-01 to 2012-13. A Compound Annual Growth Rate (CAGR) of 8.65 percent can be observed over the period, 2000-01 to 2012-13. That clearly shows that import of jute goods has upbeat trend over the years. In the financial year 2000-01, the total import of jute goods was 102.73 Th. M. Tonnes; import has decreased slightly in the year 2001-2002 to 86.52 Th. M. Tonnes and shows AGR (-)15.78. It has shown a positive trend of imports since 2002-03, and ended with 301.96 Th. M. Tonnes with AGR of 0.27 percent in financial year 2012-13.

Moreover, it is observed that Average import of jute goods in India was 174.40 Th. M.Tonnes during the study period; having a S.D. of 70.72 (i.e., fluctuation from the average value during the study period). The highest and lowest amount of import of jute goods accounted with 301.96 Th. M.Tonnes in 2012-13 and 86.52 Th. M.Tonnes in 2001-02 respectively.

The following table below represents the value of total imports of jute goods during 2000-01 to 2012-13.

Table 4.4.2: Value of Total Import during 2000-01 to 2012-13

Year	Amount (in Rs. Crores)	AGR (%)
2000-2001	152.58	--
2001-2002	125.63	-17.66
2002-2003	146.21	16.38
2003-2004	131.8	-9.86
2004-2005	160.71	21.93
2005-2006	362.33	125.46
2006-2007	321.94	-11.15
2007-2008	334.81	4.00
2008-2009	291.99	-12.79
2009-2010	650.62	122.82
2010-2011	723.98	11.28
2011-2012	971.74	34.22
2012-2013	1039.6	6.98
CAGR	15.91	

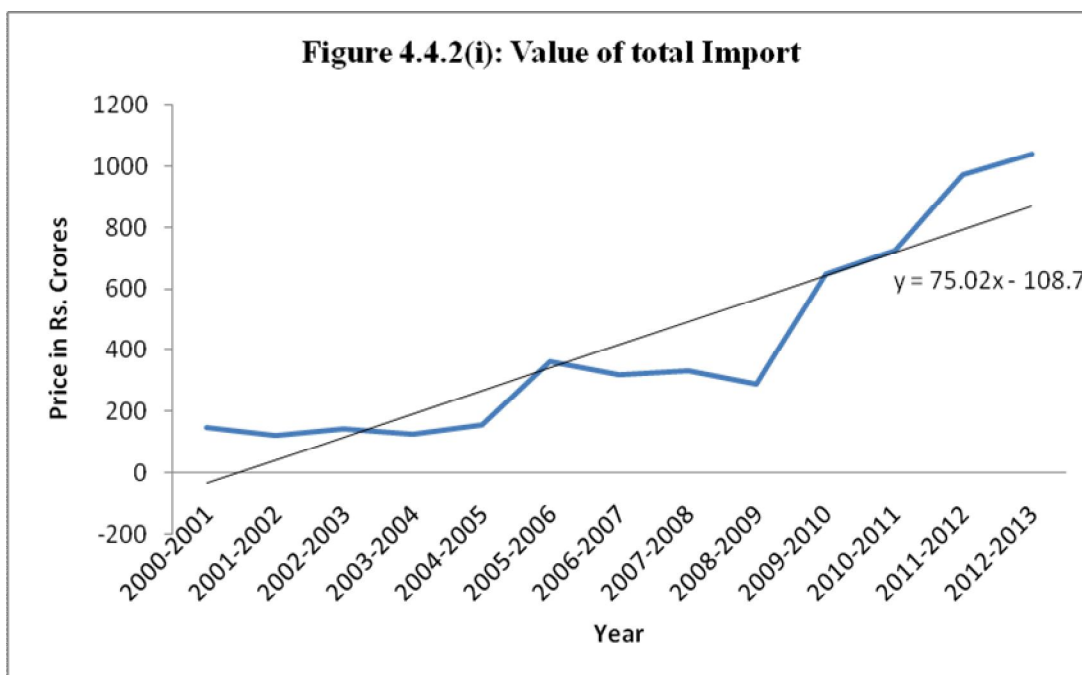
Source: National Jute Board, Annual Report, Kolkata, India, Various Issues.
Indian Jute Mill Association, Annual Report, Kolkata, India, Various Issues.

Descriptive Statistics of Table: 4.4.2

Mean	416.46
Standard Deviation	323.23
Minimum	125.63
Maximum	1039.6

Note: Calculated

The trend and pattern of import value of jute goods during the study period 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.

The above table analysing that the value of imports has shown growing trend during the study period 2000-01 to 2012-13. A Compound Annual Growth Rate (CAGR) of 15.91 percent can be observed over the period, 2000-01 to 2012-13. In the financial year 2000-01, import value of jute goods were 152.58 Rs. Crores; import has decreased in the very next year similarly value of imports also decreases to 125.63 Rs. Crores in 2001-02 with AGR (-)17.66 during the financial year. Indeed in the financial year 2002-03 import has shown growth similarly value also increases with an AGR of 16.38. Since 2002-03 imports of jute goods has shown positive trend and ended with 1039.6 Rs. Crores with AGR 6.98 percent in 2012-13.

Moreover, it is observed that average value of imports was 416.46 Rs. Crores during the study period; having a S.D. of 323.23 (i.e., fluctuation from the average value during the study period); with highest and lowest amount of imports value accounted with 1039.6 Rs. Crores in 2012-13 and 125.63 Rs. Crores in 2001-02 respectively.

The country's jute sector continuously declining in production and in export market, as imports of finished goods from other countries has increased over the years. In import of jute products, there was a jump of 24 per cent, or Rs 511 Crores, in

value terms for such products in April-February, 2014-15. The unfavourable trend seems to be gaining momentum as in February 2015 alone, imports were higher by 75 per cent in value terms and 79 per cent in volume terms as compared to the corresponding month of the previous year. IJMA sources have attributed higher imports to lack of monitoring and check in end-use of jute products. On top of this, a subsidy of 7.5 per cent by Bangladesh for export has resulted in flooding into Indian market. When the government rate is Rs 63,000 per tonne for jute, the same product is available at Rs 53,000 per tonne in the open market (The Economic Times, 2015).

It is found that the overall performance of the Indian jute industry has been gradually declining during the period 2000-01 to 2012-13. Though the performance has declined over the years but at the same time export earnings from jute goods has shown positive trend, which indicates that the demand of jute goods is still there in the international market. But due to low production and heavy demand in domestic market Indian producers are not able to meet the demand of overseas market. It has also been found that import of jute goods has increased during the period 2000-01 to 2012-13, it is because of Indian producers are not able to produce good quality of products and at the same time they are not in a position to meet the domestic demand too. Therefore, in order to meet the demand of consumers Indian government and other agencies are bound to import jute goods from other countries, primarily from Bangladesh.