

Asian Resonance

Export Performance of Raw Jute in India

Abstract

Jute is popular for its ability to use in various forms in packaging and handicraft industry. The industry contributes greatly in the country's economy and potential to propel the economy in coming years. Jute Textile industry is one of the major Industries in the Eastern India, Particular in West Bengal. The study accompanied with time series data (2002-03 to 2016-17) on dynamics of Area, Production and Productivity of jute in India is positive growth on area, production and productivity of jute. About export of raw jute the growth rate is positive to quantity and value is 20.35 and 4.75 and India performance in export of raw jute is continuously increased. And Competitiveness of raw jute is calculated for using NPC ratio is increasing rate from a year 2002-03 to 2016-17.

Keywords: Growth Rate, Area, Production, Instability Index, Competitiveness.

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Introduction

Jute (*Corchorus* spp.) is a dicotyledonous fiber crop that belongs to family Tiliaceae and genus *Corchorus*. Jute fibre is a natural fiber that is also mark named as 'golden fiber'. Jute is cheapest and most important of all textile fibers next to cotton (*Gossypium* spp.) and is used widely in manufacturing different types of packaging materials for various agricultural and industrial products. Jute fiber is obtained from two commercially important species namely, White jute (*Corchorus capsularis*) and Tossa Jute (*Corchorus olitorius*). Jute is however, our potential foreign exchange earner and must finds its place in our economy. It is estimated that more than 4 million farm families are engaged in jute farming and majority of them belongs to small and marginal categories. Besides, 0.5 million people are involved in raw jute and finished good trading and ancillary activities. Raw jute production in India is expected to touch 10.2 million bales (1 bale = 180 kg) this year with 25-30% increase in sowing area of fibre crops (Source: FAO 2017).

Review of Literature

Jute Cultivation is dependent on climate, season and soil. Almost 85% of world's Jute cultivation is concentrated in the Ganges delta. This fertile geographic region is shared by both Bangladesh and India. China also has a dominating place in cultivation of jute. Several other countries like, Thailand, Myanmar, Pakistan, Nepal and Bhutan also cultivate jute and allied fibres on a smaller scale. Jute and allied fibers are group of natural fibers which have inconceivable economic and trade importance particularly in West Bengal, India. The area under jute in India is around 7.9 lakh ha with a production of about 102.85 lakh bales. West Bengal contributes the maximum towards Jute cultivation and it shares about 74.7% and 81.6% of national acreage and production, respectively (five years average of 2006-07 to 2010-2011). Jute is the cash crop for the poor and the marginal farmers in India and it continues to be an important commodity for employment and source of income for them. To meet the demands of the industry, production of jute and allied fibers have to be increased. Two important means to achieve this is to increase the output and to increase the area covered under jute cultivation. With the continuous efforts of the scientists as well as the special programs for jute production implemented by the Government, the area and productivity of jute had improved tremendously. Even then the jute sector could not be revived to the fullest extent. The industry faced stiff competition from its cheaper substitutes. The farmers on the other hand are not receiving remunerative price for the fiber they produce. It is therefore imperative to sort out the problems to the extent possible and bring back the past glory of jute production in India.

Objectives of the Study:

1. To highlight the growth of Indian jute industry during 1950-51 to 2012-13.
2. To Estimate Area, Production and Productivity

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3. Export Performance of Raw jute
4. Competitiveness

Methodology

The nature of the present study is mainly based on secondary data. In order to attain the objectives of the study, relevant secondary data for a period of 15 years, i.e., from 2002-03 to 2016-17 have been taken for analysis. The relevant data have been analyzed by using the Compound Growth Rate (CGR) and Instability of area, production and productivity and export of raw jute, NPC and growth of jute industry was to make an in depth analysis.

Growth of Indian Jute Industry

Jute is considered mainly for packaging purpose in its early days. It is consumed mainly in the form of hessian, Sacking and CBC. Production of jute good since last decade has stagnated at comparatively higher level due to fall domestic as well as in export market.

Growth of Indian Jute Industry during 1950-51 to 2012-13

Table: 1 (Quantity in '000 M. Tonnes)

Year	Production	Export
1950-51	837.00	727.60
1960-61	1071.00	776.50
1970-71	1060.00	669.60
1980-81	1392.00	439.90
1990-91	1430.00	219.00
2000-01	1624.90	187.00
2010-11	1565.70	175.50
2011-12	1582.40	211.80
2012-13	1591.30	185.40

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

It may be clearly seen that from the above table that there are great variation in the production of jute goods. It increased from 837.00 Th. M. tones in 1950-51 to 1430.00 Th. M. 1990-91, thereby recording a growth of 70.85 per cent in a span of forty years. The Production declined in mid nineties. However, production of jute goods has rose to some extent till 2000-01, after than a sharp decline had noticed in the production of jute goods in India. Export of jute goods has continuously declined since 1950's, export accounted for 727.60 Th. M. Tonnes in 1950-51 and it has came down to 185.40 Th. M. Tonnes in 2012-13.

Estimation of growth rate

The study on growth in area, production and productivity of jute in India. The secondary data collected for 15 year (2002-03 to 2016-17) to analysis the area, production and productivity if jute in India. The data are collected for various gov. website i.e. Indiaagristat, Indian jute mill association etc.

The growth in the area, production and productivity of jute was estimating using the compound growth rates.

Growth rate was estimated using following model

$$Y = a.b^t \dots\dots\dots(1)$$

Where,

Y = Depended variable for which growth rate is to be estimated

(Area, Production and Productivity/Quantity exported / export value)

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a = Intercept

b = Regression Coefficient

t = Time Variable

This equation was estimated after transforming (1) as follows,

$$\text{Log } y = \text{log } a + t \text{ Log } b \dots\dots\dots(2)$$

Then the percent compound growth rate (g) was computed using the relationship.

$$\text{CGR } (\%) = [\text{Antilog } (\text{log } b) - 1] \times 100 \dots\dots(3)$$

The significance of the regression coefficient was tested using the student 't' test.

To estimate the coefficient of variation and instability

In order to study the variability in area, production and productivity and export of jute, an index of instability was used as a measure of variability. The data on area, production and productivity and export of jute from India during (2002-03 to 2016-17) were used to study. The coefficient of variation (CV) was calculated using the formula,

$$\text{CV } (\%) = \frac{\text{Standard deviation}}{\text{Mean}} \times 100$$

The formula suggested Cuddy and Della Valle was used to compute the index of instability
 Index of Instability = CV (%) x 100 x $\sqrt{1 - R^2}$

Table: 2

Compound Growth Rate and Instability on Area, Production and Productivity of Jute in India

Particular	Area	Production	Productivity
CGR (%)	99.48**	128.33**	1040.24**
CV	4.14	4.90	6.00
Instability Index	3.44	4.65	4.07

Table: 3

Compound Growth Rate and Instability of Export Performance of Raw Jute

Particular	Quantity (Tonnes)	Value (US Doller)
CGR (%)	20.35**	4.75**
CV	86.62	50.96
Instability	54.44**	47.22**

Results and Discussion

Compound growth rate was computed to area, production and productivity of jute and export of raw jute in India from 2002-03 to 2016-17. In order to study the variability in the area, production and productivity and export of raw jute same period an index of instability was used as a measure of variability.

Looking at the results for the overall study period (2002-03 to 2016-17), Compound growth rate on area of 99.48 per cent was observed in case area on jute significant at 1 per cent probability and 128.33 per cent on production, significant 1 per cent probability level and 1040.24 per cent on productivity at a 1 per cent significant. and coefficient of variation on area at 4.14, production on 4.90 and productivity on 6 and instability index on area 3.44, production as 4.65 and productivity as 4.07.

In other hand compound growth rate of 20.35 per cent was observed in case of export quantity of

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raw jute and was significant at 1 per cent probability level. On other hand export value registered the growth rate 4.75 per cent and it was significant at 1 per cent probability level. Then CV on export quantity is 86.62 and export value is 50.96. And instability index 54.44 and 47.22 were observed in case of export quantity and export value.

Export Competitiveness of Raw jute (2002-03 to 2016-17)

{Table: 4}

Year	Domestic Price (Rs/Kg)	International Price (Rs/Kg)	NPC
2002-03	81	274.89	0.29
2003-04	85	297.29	0.28
2004-05	86	344.43	0.24
2005-06	89	321.56	0.27
2006-07	91	296.08	0.30
2007-08	100	222.99	0.44
2008-09	105	216.07	0.48
2009-10	125	126.13	0.99
2010-11	137	69.25	1.97
2011-12	157	80.61	1.94
2012-13	167	112.49	1.48
2013-14	220	115.49	1.90
2014-15	230	119.96	1.91
2015-16	240	112.55	2.13
2016-17	270	96.53	2.79
Average 1.16			

The export competitiveness of raw jute was analyzed by using Nominal Protection Co-efficient. The competitiveness of market depends upon NPC ratio. When NPC ratio is less than 0.5, market is highly competitive, when NPC ratio is in between 0.5 to 1, the market is moderately competitive and when NPC ratio is greater than one, then market is non-competitive.

The export competitiveness of raw jute was analyzed using Nominal Protection Coefficient.

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Regard to given value of domestic and international price of raw jute is continue increase from 2002-03 to 2016-17 is 81 to 270 Rs/Kg of domestic price and international price of raw jute is slightly increase or decrease but in a year 2016-17 the price are decrease as compare 2002-03.

Table no. 4. Show that, at an overall level, the NPC average values of raw jute was worked out 1.16 its indicating moderate export competitiveness of raw jute. It was observed that the crop was moderately protected during the with average NPC value of Jute NPC average value 1.16. Table no.4 average value of NPC is more than one, and then the market is non-competitive.

Conclusion

Performance of Indian Jute industry about production is increase but export is decrease of jute. It is observed that quantity and value of the raw jute is positive growth. And area, production and productivity of jute are slightly decreased of area and production but productivity is increase. And export of raw jute the quantity and value are continuously increased. It is concluded that India is performing well in export of raw jute. In case of competitiveness was observed that the crop was moderately protected during the with average NPC value of coconut oil NPC average value 2.17.

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