



CHANGES IN DIRECTION OF TRADE AND EXPORT PERFORMANCE OF COIR IN INDIA

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Abstract India is a major supplier of coir products to the world. Export performance of coir products during pre liberalisation and post liberalisation period have been examined using secondary data for a period from 1970-71 to 2011-12. The exponential form of growth function has been used for the analysis. The results showed that the growth in export of coir products both in quantity and total value was higher in the post- liberalisation period than the pre-liberalisation period. The growth rate of export in terms of both quantity and values were positive in the case of all major importing countries except Germany during 2006-12. This trend showed that India gained the share of international market during the period. Instability was observed to be higher in the export quantity of coir products during pre-liberalisation period (13.99) than the post-liberalisation period (10.07). For the assessment of change in direction of trade, Markov chain model was used. The data regarding country-wise export of coir products had shown that China was the most stable importer of Indian coir, which retained 94 per cent of its original share for the study period and lost only 6 per cent to South Korea followed by USA and The Netherland. New export promotion strategies have to be developed for the export of coir products to all the countries and to avoid over dependence on few countries. Modernisation of technology leads to higher production with least possible cost and further value addition leads to better competitiveness in the global market.

Keywords- Coir products, growth rate, instability and direction of trade.

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Introduction

India is one of the World's largest producers of agricultural products. Nearly 70 per cent of the population depends on agriculture and agro-based industries. But India faces major challenges in improving rural incomes, which require considerable investment to add more value to agricultural output. Coir is a unique natural fibre used in diverse applications of great economic importance. This wonder fibre is extracted from coconut husk and is spun into coir yarn and a number of other value added products like coir rope, mats, matings, rugs, carpets etc. Coir fibre is also used in combination with other natural or synthetic fibres or materials such as rubber or synthetic polymers for making products that are better suited for specific uses. Coir and coir fibre products sustain the livelihood of a significant segment of the population in the coastal belt of Southern India, especially Kerala and Tamil Nadu. The Indian coir industry employs more than seven lakh persons of whom a majority is from rural areas belonging to the economically weaker sections of society. (MSME, Annual Report 2011-12)[1]

Christy Fernandez (2003) [3] studied trade and market for coir problems and prospects and reported that the future of coir industry depends on development of non conventional products. The R & D efforts in India have been successful in developing many new products, which could be utilized for a variety of applications that are cost effective and environment friendly. Capacity building and quality upgradation of the widely scattered household production units are critical in improving the domestic coir industry. The survival of coir industry depends on its ability to adapt itself quickly to the fast changing consumer preferences and widening choices. Whether for domestic or export purposes, the coir sector has to diversify keep the quality of products and services high and ensure cost effectiveness.

Meipporul and Bhanumathy (2010) [4] reported that annual compound growth

rate of coir products export was 7.29 percent. The study also showed that there was positive and significant growth in quantity of export of coir products. UK was one of the stable major importers of Indian coir products and retained its export share at 38 percent followed by USA with a retention of 30 percent followed by other countries.

Nagaraja (2011) [5] studied export of coir and coir products from India and reported that the trend in the overall volume of sale of coir and coir products significantly changed from the sixties when more than 50 percent of the production used to be exported. Export trade is dominated by private merchants and manufacturers who controlled about 90 percent of export trade. A few Government companies and some large co-operatives accounted for the remaining 10 percent. The exports of coir and coir products were mostly to Western Europe, USA, Japan and West Asia.

India's export of coir products was 3.21 lakh tonnes worth of Rs. 807.07 crores during 2010-11 and it increased to 4.11 lakh tonnes worth of Rs.1052.63 crores during 2011-12 (Coir Board, Annual Report [2]). Due to increasing production, the export quantity and value had also increased over the years. Keeping in view of the above literature, the present study has analyzed export potential of coir in India. The specific objectives of the study were: to estimate the growth and instability in export of coir, to assess the coir export trend from India and to analyze the changes in direction of trade of coir in India.

Methodology

For the present study, the secondary data was collected from various sources such as Annual Reports, Yearbooks, www.Indiastat.com and Coir Board. The study period was divided into two sub-periods, viz. pre-liberalization (1970-71 to 1990-91) and post-liberalization (1991-92 to 2011-12). Quantity, value and unit

price of coir products exported to various countries were collected. The data was analysed by using growth rate, instability index and Markov chain process

Results and Discussion

Growth Rates of Indian Coir Products

The results of growth analysis of coir products are presented in [Table-1]. It is evident from the table that growth in coir products export in both quantity and total value was found to be higher in the post-liberalisation period (around 42 per cent) than the pre-liberalisation period. The growth rate was found to be more than 35 per cent for both quantity and value of exports.

Table-1 Compound growth rates for quantity and values of Indian coir products

Year	Export quantity	Export Values
1970-71 to 1990-91 (Pre-liberalisation period)	35.19*	38.87*
1991-92 to 2011-12 (Post-liberalisation period)	42.11*	41.25*
Overall (1970-71 to 2011-12)	38.72*	41.54*

Note: * significance at 1 per cent level

It implied that higher quantity of coir products are being exported after export liberalisation. The overall export quantity and export value of coir products were significant at one per cent level over the study period. The main reason for increase in export quantity was technology upgradation led production due to which there was a possibility for increasing the export.

Instability Analysis of Coir products Trade

The instability index was worked out for coir products trade in India for the three periods to analyse the extent of instability. It was observed from [Table-2] that the export quantity was almost stable in pre liberalisation period and over all period (1970-71 to 2011-12). The fluctuations in the export quantity of coir products was higher during pre-liberalisation period (13.99 percent) compared to the post-liberalisation period (10.07 percent). This indicated that the export growth during post-liberalisation period did not fluctuate much due to lesser control and restrictions, huge production and growing demand for Indian coir products in the international markets.

Table-2 Instability Index for coir and Coir products Exports

Particulars	1970-71 to 1990-91 (Pre-liberalisation)	1991-92 to 2011-12 Pre-liberalisation)	Overall (1970-71 to 2011-12)
Export quantity	13.99	10.07	14.59
Export Values	11.48	10.26	12.37

The instability index on whole during pre-liberalisation period was 11.48 units which were higher compared to post-liberalisation period (10.26 units). When compared between export quantity and export value, the export quantity showed a lower instability during post-liberalisation period. These results implied that there was a high fluctuation in trade of Indian coir products during pre-liberalisation than post-liberalisation period.

Table-3 . Trend in Coir Export Quantity from India (2006-07 to 2011-12).

Countries	Average Export Quantity (in tonnes)	Share (%)	CV (%)	CGR (%)
USA	48046.09	18.22	26.75	12.82
Republic of China	53020.80	20.10	90.16	82.51
Netherlands	36391.66	13.80	18.50	9.69
UK	11976.04	4.54	24.74	8.01
Germany	7031.70	2.67	13.05	-5.34*
Italy	7571.54	2.87	28.92	11.81
Spain	13595.44	5.15	23.01	11.57
South Korea	24180.54	9.17	39.43	22.85
Australia	7729.98	2.93	14.44	7.92
France	3707.53	1.41	15.93	7.74
Others	50519.41	19.15	24.65	12.78
Total	263770.72	100.00	35.87	20.23

Table-4 . Average Value Share of Coir Export from India to Major Countries

Countries	Average Export Quantity (in tonnes)	Share (%)	CV (%)	CGR (%)
USA	21615	28.81	8.33	1.4
Republic of China	8027	10.70	102.24	99.3
Netherlands	5918	7.89	25.66	14
UK	5876	7.83	19.85	7.06
Germany	4452	5.93	11.45	-1.93*
Italy	3206	4.27	19.64	9.4
Spain	2721	3.63	18.04	6.71
South Korea	2002	2.67	49.05	30.18
Australia	2101	2.80	25.81	12.95
France	2179	2.90	21.74	10.6
Others	16934	22.57	20.17	10.01
Total	75029	100.00	23.51	11.86

Coir Export Trends from India

Trends in quantity of coir products exported from India are presented in [Table-3]. Among the coir exporting countries, the rate of annual growth of export to Republic of China was the highest among importing countries with 82.51 per cent. However, the coefficient of variation of export to Republic of China was the highest among other major importing countries, which indicated that there was instability in quantity exported to Republic of China. The export share to China was also comparatively higher (20.10) followed by USA (18.22), The Netherlands and the countries pooled under others categories.

The results indicated that the growth of export in terms of quantity was positive for all major importing countries except Germany during 2006-12. This trend showed that India gained the share of international market during the period (2006-07 to 2011-12).

The value of coir exports to different countries from India were presented in [Table-4]. The results showed that trend in value of exports were found to be positive and encouraging.

The rate of growth of export value to Republic of China was the highest among importing countries with 99.30 per cent per year followed by South Korea with 30.18 per cent and Australia with 12.95 per cent. However, the coefficient of variation of export to Republic of China was the highest among other major importing countries, which indicated that there was higher variation in export values to Republic of China. In terms of share, USA ranked first in export value followed by China and Other countries. It indicated that India exported more value added products to USA than China during the study period.

The results also indicated that the growth in value of export was positive for all major importing countries except Germany.

Direction of Coir Export from India

The direction of export of coir from India was analyzed using the estimated transitional probability matrix from the Markov chain method. Transitional probability matrix for quantity of coir exported during the period 2006-07 to 2011-12 was presented in [Table-5]. For convenience, the probability values are expressed in per cent. Eight major countries which imported Indian coir products during the period were: China, USA, The Netherlands, South Korea, Spain, UK, Australia and Italy. Export to remaining countries was pooled under the category of other countries. The retention coefficient along the diagonal probability matrix indicated the probability of retaining the current share of export for the forthcoming years. The table revealed that China was the most stable importer of Indian coir, which retained 94 per cent of its original share for the study period and lost only 6 per cent to South Korea. It gained from the share of South Korea to the extent of 46 per cent. Hence, in future China would be most probably the stable importer of Indian coir.

The second biggest importer of Indian coir was USA which retained 35 per cent of its original share, however it had a probability of losing its original share to the extent of 26 per cent to Spain, 22.50 per cent to South Korea, 7.50 per cent to Italy, 7.30 per cent to Australia and 1.3 per cent to The Netherlands. It gained

from the share of South Korea to an extent of 50.80 per cent, 47.60 per cent from Spain and 14.10 per cent from other countries. The Netherlands which retained its original share of only 4.30 per cent, however had a probability of losing its original share to the extent of 71.40 per cent to countries pooled under others category and 24.30 per cent to South Korea. It gained from the share of UK to the extent of 100 per cent and 37.10 per cent share from countries pooled under other category.

South Korea has not retained its original share and it lost a major share to USA (50.80 per cent) followed by China (46.30 per cent). It gained from the share of The Netherlands (24.30 per cent) followed by USA (22.50 per cent). Spain lost a major share to UK (52.40 per cent) followed by USA (47.60 per cent). It gained from the share of 26.40 per cent from USA. UK lost a major share to The Netherlands (100 per cent) and it gained from 52.40 per cent from Spain. Australia has not retained its original share and it lost a major share to countries pooled under other categories (100 per cent). It gained the major share from Italy (56.90 per cent). Italy also lost the major share to Australia (56.60 per cent) and other countries (43.10 per cent). Italy gained the minimum share from USA, Others and South Korea.

Countries such as South Korea, Spain, UK, Australia and Italy were not the importers of Indian Coir and these countries lost all its share and retention per cent of original share was found to be zero per cent and hence these countries were not reliable export destinations for Indian coir. The countries pooled under other category retained its original share of 38.20 per cent, but it had a probability of losing its original share to The Netherlands and USA. It gained from Australia (100per cent), followed by The Netherlands (71.40 per cent) and Italy (43.10 per cent).

Meipporul and Banumathy (2010) have assessed the direction of export of coir products. They reported that UK (38 per cent) was the major stable importer of Indian coir products followed by USA (30 per cent). These two countries have also gained from other countries in the export share of coir products. The countries such as Germany, The Netherlands, Italy, Spain and France were found to be not stable importer of Indian coir products. The results endorsed the present study, except in the case of China which indicated retention of 94.10 per cent of its original share. UK was the stable importer of Indian coir products which retained its original share of 38 per cent. But, in the present study its share reduced drastically and hence it was clubbed under other countries category. The reason may be that UK imported coir products from Sri Lanka where the cost was comparatively lower.

The results of Markov chain analysis revealed that China was the most reliable importer of Indian coir fibre followed by USA and The Netherlands. The countries such as South Korea, Spain, UK, Australia and Italy were not the reliable importers of Indian coir. Appropriate policy measures have to be considered in order to retain the Indian coir exports and necessary initiatives have to be taken up for the retrieval of the international market share.

Table-5 . Direction of Coir Export to Major Destinations (2006-07 to 2011-12)

Countries	Republic of China	USA	The Netherlands	South Korea	Spain	UK	Australia	Italy	Others
Republic of China	0.941	0.000	0.000	0.059	0.000	0.000	0.000	0.000	0.000
USA	0.000	0.350	0.013	0.225	0.264	0.000	0.073	0.075	0.000
The Netherlands	0.000	0.000	0.043	0.243	0.000	0.000	0.000	0.000	0.714
South Korea	0.463	0.508	0.000	0.000	0.000	0.000	0.000	0.029	0.000
Spain	0.000	0.476	0.000	0.000	0.000	0.524	0.000	0.000	0.000
UK	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000
Australia	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
Italy	0.000	0.000	0.000	0.000	0.000	0.000	0.569	0.000	0.431
Others	0.000	0.141	0.371	0.000	0.000	0.070	0.000	0.036	0.382

Conclusion and Policy Implications

Analysis of growth in export and direction of trade in coir products revealed that the growth of coir product export is satisfactory but the direction of trade gives a warning. It indicates that China is major stable importer of Indian Coir products followed by USA and The Nether lands. These countries were also found gaining the export share of coir products from other countries. The trade liberalisation had a well defined impact on coir products exports and lead to modernisation of processing technology and further value addition of products. New export promotion strategies have to be designed for the export of coir products to all the countries and to avoid over dependence on these few countries.

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