

A STUDY ON EXPORT PERFORMANCE OF COCOA PRODUCTS IN INDIA

¹ Dr. S. KARPAGALAKSHMI, ² Dr. A.MUTHUSAMY,

¹ Teaching Assistant, Department of International Business, Alagappa University, Karaikudi-4, Tamil Nadu

² Professor, Department of International Business, Alagappa University, Karaikudi-4, Tamil Nadu

Email - ¹ karpagalakshmiselvamani@yahoo.in , ² muthuroja67@rediff.mail.com,

Abstract: *Cocoa is an important commercial plantation crop and is one among the most traded commodities in the global market. It is attempting to improve processed goods exports, which contributes more to over foreign exchange earnings. Cocoa is an export oriented commodity. In India, at present there are 10 multinational companies engaged in the field of cocoa industry and exports products like Beans, chocolates, cocoa butter, cocoa powder and cocoa based products to other countries. India earns foreign exchange worth Rs. 849 cores through exports of cocoa bean and its products. In this paper an attempt is made to analyze the growth rate of export and import performance of Cocoa in India. This study is mainly based on a secondary data has been collected for the years 2013-14 to 2018-19. Trend analysis and the Compound Growth Rate are calculated to understand the changes during the study periods.*

Key Words: *Cocoa export, Compound growth rate, Earnings of Cocoa, Projected value of export and import Cocoa.*

1. INTRODUCTION:

Cocoa is one of the most widely traded agricultural commodities in the world. Due to that the growers of India as well as exports are not getting the maximum profit being one of the producers of Cocoa. Cocoa is a commercial plantation crop. The seeds of cocoa fruit, yield flavoured cocoa powder on fermentation. Cocoa is hardly grown as a mono crop. Its imminent capacity to share the alley spaces of tall growing Coconut and Areca nut palms and its combining ability with the microclimatic conditions available in such perennial gardens helps its cultivation in utilizing such areas without exacting for an independent growing climate of its own. The country has exported 29582.58 MT of Cocoa products to the world for the worth of Rs. 1144.37 crores/ 177.47 USD Millions during the year of 2017-18. In India Cocoa is being cultivated in the States of Kerala, Karnataka, Andhra Pradesh and Tamil Nadu in an area of 78000 ha with total production of 16,050 MT. Tamil Nadu ranks first with an area of 26,969 ha whereas Andhra Pradesh ranks first in production. The highest productivity is in Kerala which is 785 kg/ha. The average productivity of cocoa in Indian is 475 Kg/ha. The demand of chocolate industry and confectionaries in India is 30,000 MT of dry bean per annum. The current domestic production of cocoa beans is not sufficient to meet the demand of the industry. The study also identifies and analysis the processing of cocoa in India.

2. NEED FOR THE STUDY:

India is an agrarian economy where more than 60% of population depends on agriculture for their livelihood. Majorities of exports are of raw materials and other agricultural products. It is attempting to improve processed goods exports, which contributes more to over foreign exchange earnings. The export performance by India as one of the Major producing countries is increasing gradually because of the high consumption of cocoa in food & other products like pharmaceuticals, cosmetics etc. The existing supply not able to cover the demand that is prevailing which has made this area of export a high profitable one. This has led some of the countries to concentrate on this products export by increasing the area, output & yield under this crop emerging as the competitors to India.

3. OBJECTIVES OF THE STUDY:

- To study the export performance of cocoa products in India.
- To study the country-wise export performance of cocoa products in India.
- To study the country-wise import performance of cocoa products in India.

4. HYPOTHESES OF THE STUDY:

The following hypotheses are formulated and tested by the researcher in the present study, namely

- There is no significant difference in the values of country-wise export performance of cocoa products during the period of 2013-14 to 2017-18.

- There is no significant difference in the values of country-wise import performance of cocoa products during the period of 2013-14 to 2017-18.

5. METHODOLOGY OF THE STUDY:

The study is mainly based on secondary data. The required data were collected from important publication reports which are available at the web. In order to evaluate the information collected from different sources to fulfil the objectives of present study. This study has used the statistical tools such as mean, SD, Co-efficient of variance, Growth rate, and ANOVA and Projected value.

5.2 PERIOD OF THE STUDY

This study has taken a period of five years from 2013-14 to 2017-18 .

5.2 SHARE OF COCOA PRODUCTS IN INDIA’S TOTAL EXPORTS

To understand the growing importance of Cocoa products in India’s exports. The following table 1 highlights the total export and cocoa export value given for the study period

**TABLE 1
 SHARE OF COCOA EXPORT IN INDIA’S TOTAL EXPORTS**

(Rs. in Lacs)			
YEAR	TOTAL EXPORT	COCOA EXPORT	% SHARE OF COCOA EXPORT EARNING TO TOTAL EXPORTS
2013-14	16,34,34,828.96	29,392.12	0.018
2014-15	19,05,01,108.86	57,321.74	0.030
2015-16	18,96,34,841.76	84,865.67	0.045
2016-17	17,16,37,804.58	1,26,760.66	0.074
2017-18	18,49,42,875.55	1,08,677.27	0.059
Mean	180030291.9	81403.492	
S.D	39045.59	11956819.16	
C.V	0.48	0.07	
CAGR%	2.50	29.89	

Source: DGCI&S

The table 1 reveals that the total exports increased from Rs.16,34,34,828.96 lacs in 2013-14 to Rs.18,49,42,875.55 in 2017-18 on this cocoa products exports has accounted for 0.018 per cent of India’s total exports in 2013-14 increased to 0.059 per cent in 2017-18 but in absolute terms, it increased from Rs. 29,392.12 to Rs.1,08,677.27 Lacs during the period. The co-efficient of variation for total exports as 0.48 per cent and cocoa products exports as 0.07 per cent. The compound annual growth rates for total exports were 2.50 per cent, for cocoa products exports 29.89 per cent showing a significant and consistent growth performance.

5.3 EXPORT PERFORMANCE OF COCOA

Cocoa is an export oriented commodity. In India, at present there are 10 multinational companies engaged in the field of cocoa industry and exports products like Beans, chocolates, cocoa butter, cocoa powder and cocoa based products to other countries. India earns foreign exchange worth Rs. 849 cores in 2018-19 through exports of cocoa bean and its products. India’s potential to achieve self- sufficiency in cocoa is not exploited due to low involvement of capable farmers in cocoacultivation.

**TABLE 2
 EXPORT PERFORMANCE OF COCOA**

(Rs. in Lacs)			
YEAR	INDIA’S TOTAL EXPORTS	COCOA EXPORTS	GROWTH RATE
2013-14	16,34,34,828.96	29,392.12	-
2014-15	19,05,01,108.86	57,321.74	95%
2015-16	18,96,34,841.76	84,865.67	48%
2016-17	17,16,37,804.58	1,26,760.66	49%
2017-18	18,49,42,875.55	1,08,677.27	-14%

Source: Computed

The table 2 indicates that the export of cocoa was found to be at the maximum growth rate 95% in 2014-15 and the export of cocoa was at the minimum growth rate of -14% in 2017-18.

Table 3
PROJECTED VALUE OF EXPORT

(Rs. in Lacs)

Year	Projected value
2018-19	162784
2019-20	182846.2
2020-21	202908.4
2021-22	222970.5
2022-23	243032.7

Source: Computed

Table 3 reveals the export value of cocoa is found to be increasing for the years to come. In the year 2018 the export value would be in the tune of Rs.243032.7. The export of cocoa has a good steady increase so the value of the export is found to be increasing steadily.

5.4 IMPORT PERFORMANCE OF COCOA

The demand of chocolate industry and confectionaries in India is 30,000 MT of dry bean per annum. The current domestic production of cocoa beans is not sufficient to meet the demand of the industry. Hence India is importing a lion share of its requirement from other cocoa growing countries worth Rs.1551 crores in 2018-19.

TABLE 4
IMPORT PERFORMANCE OF COCOA

(Rs in Lacs)

YEAR	INDIA'S TOTAL IMPORTS	COCOA IMPORT	GROWTH RATE
2013-14	26,69,16,195.69	1,04,924.90	-
2014-15	27,15,43,390.74	1,07,154.96	2%
2015-16	27,37,08,657.84	1,55,162.71	45%
2016-17	24,90,29,808.12	1,39,890.92	9.8%
2017-18	25,77,66,559.22	1,54,227.61	10%

Source: Computed

The above table 4 shows that the import of cocoa was found to be at the maximum growth rate 45% in 2015-16 and the import of cocoa was at the minimum growth rate of -9.8% in 2016-17.

5.5 PROJECTED TREND VALUE OF IMPORT

The import trend in respect of cocoa products in terms of value is found out with by method of least square to find out the projected value for the period2018-19 to 2022-23.

TABLE 5
PROJECTED VALUE OF IMPORT

(Rs .in Lacs)

YEAR	PROJECTED VALUE
2018-19	193061.9
2019-20	208439.5
2020-21	223817.2
2021-22	239194.9
2022-23	254572.6

Source: Computed

The above table 5 reveals that trend movement of overall cocoa products import in India during the period 2018-19 to 2022-23 is upward trend value from Rs.193061.9 toRs.254572.6.

5.6 COUNTRY-WISE EXPORT PERFORMANCE OF COCOA PRODUCTS

The major export destinations of the countries are U S A, Turkey, Indonesia, Germany and UAE.Cocoa is an important plantation crop grown for chocolates around the world.

TABLE 6
COUNTRY-WISE EXPORT PERFORMANCE OF COCOA PRODUCTS IN INDIA

(Rs .in Lacs)

YEAR	U S A	NETHERLAND	GERMANY	UAE	INDONESIA
2013-14	10,482.61	1,787.04	711.97	2,936.52	2,477.17
2014-15	19,171.33	8,752.78	606.15	6,767.87	4,873.43
2015-16	24,141.55	7,139.83	804.21	9,805.07	1,922.81

2016-17	23,965.77	4,358.36	4,901.67	7,222.04	3,049.28
2017-18	23,028.36	958.35	8,388.51	7,700.81	8,683.05
CAGR	17.05	-11.72	63.77	21.27	28.51
Rank	IV	V	I	III	II

Source: DGCI&S

The Compound Growth Rates of cocoa products are shown for the study period (2013-14 to 2017-18). Regarding cocoa products, the maximum growth rate in exports has been observed in the case of Germany (63.77 per cent). The Growth rate has been observed in the case of Indonesia as 28.51 per cent, followed by UAE 21.27 per cent and USA 17.05 per cent. As far as the minimum growth rate is considered in exports of cocoa products, it has been found in Netherland with -11.72 per cent during the study period.

5.7 COUNTRY-WISE IMPORT PERFORMANCE OF COCOA PRODUCTS

The major Import destinations of the countries are U S A, Netherland, Germany, France and Italy.

TABLE 7
COUNTRY-WISE IMPORT PERFORMANCE OF COCOA PRODUCTS ININDIA

YEAR	U S A	NETHERLAND	GERMANY	FRANCE	ITALY
2013-14	802.63	3534.87	1360.24	36.4	7793.61
2014-15	1687.97	6308.75	1373.6	206.44	8835.62
2015-16	1461.64	5381.45	864.06	214.01	6845.01
2016-17	1739.93	6404.94	727.86	46.04	7346.05
2017-18	2,449.53	8,030.37	1,569.45	79.79	9,467.93
CAGR	25.00	17.83	2.90	17.00	3.97
Rank	I	II	V	III	IV

Source:DGCI&S

The Compound Growth Rates of cocoa products are shown for the study period, the maximum growth rate in imports has been observed in the case of USA(25 per cent), followed by Netherland (17.83 per cent), France (17 per cent), whereas Minimum Growth rate in import has been found in Italy (3.97 per cent) and Germany (2.90 per cent).

5.8 COUNTRY-WISE EXPORT PERFORMANCE OF COCOA PRODUCTS IN INDIA DURING THE PERIOD 2013-14 TO 2017-18

The following table presents the country-wise export performance of engineering goods in India during the period 2013-14 to 2017-18

TABLE 8
COUNTRY-WISE EXPORT PERFORMANCE OF COCOA PRODUCTS IN INDIA DURING THE PERIOD 2013-14 TO 2017-18

Year	2013-14	2014-15	2015-16	2016-17	2017-18
U S A	10,482.61	19,171.33	24,141.55	23,965.77	23,028.36
Netherland	1,787.04	8,752.78	7,139.83	4,358.36	958.35
Germany	711.97	606.15	804.21	4,901.67	8,388.51
UAE	2,936.52	6,767.87	9,805.07	7,222.04	7,700.81
Indonesia	2,477.17	4,873.43	1,922.81	3,049.28	8,683.05
Total	18,395.31	40,171.56	43,813.47	43,497.12	48,759.08

Source:DGCI&S

The table 8 reveals that the relevant details whether the country-wise export performance of cocoa products in India differed significantly and whether the country-wise export differed across the five years. Two-way ANOVA was used.

Two sets of Null Hypothesis

Set-1: Ho: There is no significant difference in the values of country-wise export performance of cocoa products in India.

Set-2: Ho: There is no significant difference in the values of country-wise export of cocoa products during the period of 2013-14 to 2017-18.

TABLE 9
ANOVA

	Sum of Squares	df	Mean Square	F-value	P-value	F crit
Between Column	995014816.3	4	248753704.1	23.612	1.520	3.006

Within Row	112906521.3	4	28226630.32	2.679	0.069	3.006
Residual	168560716.8	16	10535044.8			
Total	1276482054	24				

Source: Computed

* Significant at 5% level

RESULT

Set-1: Ho: The calculated value of ‘F’ (23.612) is more than the critical value of ‘F’ (3.006), so the null hypothesis is rejected. Hence there is a significant difference in the values of country-wise export performance of cocoa products in India.

Set-2: Ho: The null hypothesis is accepted as the calculated value of ‘F’ (2.679) is less than the critical value of ‘F’ (3.006) at 5% level of significant. Hence, it is concluded that there is no significant difference in the values of country-wise export of cocoa products during the period 2013-14 to 2017-18.

5.9 COUNTRY-WISE IMPORT PERFORMANCE COCOA PRODUCTS IN INDIA DURING THE PERIOD 2013-14 TO 2017-18

The following table presents the country-wise import performance of cocoa products in India during the period 2013-14 to 2017-18

**TABLE 10
 COUNTRY-WISE IMPORT PERFORMANCE COCOA PRODUCTS IN INDIA DURING THE PERIOD 2013-14 TO 2017-18**

Year	(Rs in Lacs)				
	2013-14	2014-15	2015-16	2016-17	2017-18
U S A	802.63	1687.97	1461.64	1739.93	2,449.53
Netherland	3534.87	6308.75	5381.45	6404.94	8,030.37
Germany	1360.24	1373.6	864.06	727.86	1,569.45
France	36.4	206.44	214.01	46.04	79.79
Italy	7793.61	8835.62	6845.01	7346.05	9,467.93
Total	13527.75	18412.38	14766.17	16264.82	21597.07

Source: DGCI&S

The table 10 reveals that the relevant details whether the country-wise import performance of cocoa products in India differed significantly and whether the country-wise import differed across the five years. Two-way ANOVA was used.

Two sets of Null Hypothesis

Set-1: Ho: There is no significant difference in the values of country-wise import performance of cocoa products in India.

Set-2: Ho: There is no significant difference in the values of country-wise import of cocoa products during the period of 2013-14 to 2017-18.

**TABLE 11
 ANOVA**

	Sum of Squares	df	Mean Square	F-value	P-value	F crit
Between Column	234780671.3	4	58695168	101.204	3.797	3.006
Within Row	8135516.808	4	2033879	3.506	0.030	3.006
Residual	9279460.029	16	579966.3			
Total	252195648.1	24				

Source: Computed

6. RESULT:

Set-1: Ho: The calculated value of ‘F’ (101.204) is more than the critical value of ‘F’ (3.006), so the null hypothesis is rejected. Hence there is a significant difference in the values of country-wise import performance of cocoa products in India.

Set-2: Ho: The null hypothesis is rejected as the calculated value of ‘F’ (3.506) is more than the critical value of ‘F’ (3.006) at 5% level of significant. Hence, it is concluded that there is a significant difference in the values of country-wise import of cocoa products during the period 2013-14 to 2017-18.

7. CONCLUSION:

Many chocolate companies are providing buy-back schemes to the farmers assuring them that their produce will be bought after production, in spite of providing inputs to the farmers. Hence this seems like a boon to the farmers under

the cultivation of the crop. India is able to produce to meet the export demand fetching remunerative and fair prices to the farmers in the international market. To plan interventions like market linkages, handling facilities, processing and protection measures should be implemented so that farmer's take interest to increase the production. The government's measures on focused markets and focused product schemes in increasing the export pattern and several export-boosting measures like extension of its interest subvention scheme to boost exports

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