

Trade Liberalisation and Performance of Cardamom Production in India

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The Structural Adjustment Programme carried out since 1991, involving liberalisation, globalisation and privatisation has transformed Indian economy from the regime of controls, regulations to the one characterised by deregulation and free market economy. Trade liberalisation has triggered a new set of prospects and challenges for India. Cardamom is one of the spices traded the most internationally. It is one of the major agricultural commodities of trade in India since pre-historic times and India is one of the largest producers of cardamom in the world. Cardamom is the main source of livelihood for the rural households in the cardamom growing regions of Kerala and the increased production has immense potential to contribute towards the sustainable development of these regions. As India completes 28 years of its tryst with economic reforms, it is high time to examine the performance of cardamom production in the liberalised regime.

Keywords: Trade Liberalisation, Compound Annual Growth Rate, Acceleration, Deceleration.

Introduction

India is known as the “land of spices”. The agro-climatic conditions in India are favourable for the growth of a wide variety of spices. According to the data of Bureau of Indian Standards, 63 spices are produced in the country. During 2017-18, India exported 10,28,060 tonnes of spices and spice products valued Rs.17929.55 crores (Spices Board, 2018). Cardamom, popularly known as the "queen of spices", is the world's third-most-expensive spice next to vanilla and saffron. The world production of cardamom is around

35000 MT per annum. India is the second major cardamom producing country and India's cardamom production in 2017-18 was estimated at 26,070 tonnes (Spices Board, 2018). Kerala and Karnataka are the two major states producing small cardamom and Sikkim and West Bengal are the leading producers of large cardamom in India. India's demand and supply scenario play a significant role in the world cardamom market. India was the leading producer of cardamom till 1980. Since 1980s Guatemala emerged as the world's leading cardamom producer country accounting for about 90 per cent of world's cardamom trade of about 25,000 tonnes per annum. The cardamom production in the country is faced with many challenges in the recent years such as the decline in area, production and yield and fluctuations in prices and exports.

In spite of being one of the leading producers of cardamom, India has not utilised its complete potential to maintain its supreme position in the world cardamom market. There were significant changes in the world agricultural trading environment during the latter half of the 20th century. Trade liberalisation in 1991 and India's commitments under Agreement on Agriculture had a significant impact on agricultural trade. Cardamom economy in the country is also facing stiff competition from other producing countries in the post liberalisation period. Hence, it is pertinent to examine the impact of trade liberalisation on cardamom production in India.

Objectives

The study is aimed at the following objectives:

1. To analyse the trends in area and production of cardamom in India
2. To analyse the nature of growth in area and production of cardamom in India

Methodology

The study is based on secondary data from 1970-71 to 2017-18. Data on cardamom area and production were taken from Spices Board, Cochin. The growth performance of production and area under cultivation in India were analysed using compound annual growth rate analysis. In order to examine temporal growth in production, the growth period was classified into pre liberalisation(1970-71 to 1990-91)and post liberalisation(1991-92 to 2017-18) periods.

Results and Discussion

Trends in Area under Cultivation and Production of Cardamom

Table-1
Compound annual growth rate in area and production of cardamom in India
(Percentage)

Item	Overall Period (1970-71 to 2017-18)	Pre-liberalisation period (1970-71 to 1990-91)	Post-liberalisation period (1991-92 to 2017-18)
(1)	(2)	(3)	(4)
Area	-0.19 (1.629)	1.88*** (5.774)	-0.65*** (4.780)
Production	4.81*** (20.75)	6.12*** (6.289)	3.71*** (9.882)

Note: ***1% Significant level; ** 5% Significant level; * 10% Significant level .Figures in the parenthesis are t-values

Source: computed on the basis of data from Spices Board, Cochin.

The results in Table-1 indicated that during the period 1970-71 to 2017-18 the annual trend growth rate of area and production in India was -0.19 percent and 4.81 percent respectively. All the trend estimates except area under cultivation during the overall period is statistically significant at 1 percent level. The trend growth rate in area was lower compared to the trend growth rates of production.

During the pre-liberalisation period there was a positive growth rate in area(1.88 percent) and production(6.12 percent). The growth rate in area and production was higher

during the pre-liberalisation period compared to the post-liberalisation period. During the post-liberalisation period the area under cultivation in India registered a significant negative growth rate(-0.65 percent).

Acceleration or Deceleration in India

Even though there was a positive growth rate in production during the overall period (1970-71 to 2017-18) in India, the rate of growth changes is very crucial. Moreover, the rate of change is a major factor indicating the prospects of cardamom economy of India. In order to examine the acceleration, deceleration or stagnation in the growth of area and production of cardamom cultivation, the log quadratic equation was used.

The equation is expressed as $\ln(Y)=A+Bt+Ct^2+e$

Table-2
Nature of Growth in Area, and Production of Cardamom in India
Overall Period(1970-71 to 2016-17)

	Area			Production		
Variable	Coefficient	S.E	t-statistic	Coefficient	S.E	t-statistic
Constant	11.4164***	0.0419573	272.1	7.78923***	0.091748	84.90
T	0.0168796***	0.003950	4.273	0.0700655***	0.008637	8.112
T ²	-0.000383***	7.81555e-05	-4.912	-0.000471***	0.0001709	-2.760
R ²	0.484529			0.917		

Note: ***1% Significant level

The trend growth rates had shown a negative growth trend in all the two indicators during the overall period. Results in the table 2 indicate that the value of coefficient of (T²) for area and production were -0.000383 and -0.000471 respectively and statistically significant which indicates that area and production are growing at a declining rate.

Table-3

**Nature of Growth in Area and Production of Cardamom in India
Pre-liberalisation period(1970-71 to 1990-91)**

	Area			Production		
Variable	Coefficient	S.E	t-statistic	Coefficient	S.E	t-statistic
Constant	11.3030***	0.063817	177.1	7.80284***	0.194330	40.15
T	0.0344675**	0.013361	2.580	0.0664179	0.0406874	1.632
T ²	-0.000720	0.0005898	-1.221	-0.0003192	0.00179616	-0.1777
R ²	0.6647			0.676		

Note: ***1% Significant level; ** 5% Significant level; * 10% Significant level

Table-3 shows that, during the pre-liberalisation period, the value of coefficient of (T²) for area and production were negative and not significant which implies stagnation in area and production of cardamom in India.

**Table-4
Nature of Growth in Area and Production of Cardamom in India
Post-liberalisation Period (1991-92 to 2017-18)**

	Area			Production		
Variable	Coefficient	S.E	t-statistic	Coefficient	S.E	t-statistic
Constant	11.6524***	0.0296410	393.1	9.0881***	0.0942766	96.40
T	-0.0207814***	0.00487895	-4.259	0.044502***	0.0155181	2.868
T ²	0.000511112 ***	0.000169113	3.022	-0.00028849	0.000537884	-0.5363
R ²	0.621573			0.798600		

Note: ***1% Significant level; ** 5% Significant level; * 10% Significant level

Results in Table 4, revealed that during the post-liberalisation period, the value of coefficient of (T²) for area was (0.00051) and significant which implies acceleration in area under cardamom cultivation. The value of the coefficient of (T²) for production (-0.000288)

was not significant and it denotes that there was stagnation in the growth of cardamom production in India.

Conclusion

The impact of trade liberalization on agricultural sector can be examined by analysing the changes in the cropping pattern, changes in production and prices of various crops. The present study examined the trends and nature of growth in cardamom production in India. There was deterioration in the performance of cardamom in terms of area and production at the all India level in the post-liberalisation period. This was mainly due to decline in the performance of cardamom in Kerala. The nature of growth in area and production at the all-India level showed acceleration in area under cardamom cultivation and stagnation in the growth of cardamom production during the post-liberalisation period. In order to regain India's supremacy in world cardamom market, proper policies and programmes have to be designed to increase the production and yield of cardamom.

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