

PRICE TREND OF COCONUT OIL DURING THE PRE AND POST LIBERALISATION PERIOD - AN ANALYSIS

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ABSTRACT

In India, Coconut and its products are liable to cycles and this cyclical production translates into cyclical behavior of price movements. Therefore, it is very difficult to predict price movements. The domestic coconut market is influenced by the price behavior of coconut oil and hence the price of coconut oil determines the prices of the coconut and its products. The study has made an attempt to study the price fluctuation of coconut oil, in the Kochi, Alappuzha and Kozhikode markets in order to throw light in to the behavior of price movements of coconut oil. The price of coconut oil showed a sharp decline in the growth rate in the post-liberalization compared to pre-liberalization and The fluctuation in the prices of coconut oil was very severe in the post-Liberalization period. So it can be concluded that the Liberalization adversely affected the price of the coconut oil in Kerala.

KEYWORDS

Average Annual Growth Rate, Coconut Oil, Exponential Growth Rate, Pre-Liberalization, Post-Liberalization, Price Trend, Price Variations.

INTRODUCTION

India which stands at the third position of the world's coconut production according to the FAO statistics 2013, is one of the largest players in the world coconut trade. The domestic coconut market is influenced by the price behavior of coconut oil and hence the price of coconut oil determines the prices of the coconut and its products. In recent years, the use of coconut oil for industrial purposes having suffered a setback, a crises looms over the industry. The liberal import of palm oil and the dynamic growth patterns noticed for other cheaper vegetables oils have cut into coconut oil markets even in diehard consuming states like Kerala. There are pressures on the foreign trade front as well. Some of these are closely linked to the changes in the global trading environment brought in by the WTO agreements.

Logically, the pressures have maximum for the coconut oil segment in the coconut sector.

In India, Coconut and its products are liable to cycles and this cyclical production translates into cyclical behavior of price movements. Therefore, it is very difficult to predict price movements. Till 1980, there was a price cycle for coconut products and it was linked to production in Kerala. But it has changed in the last decade as Kerala's monopoly in production of coconut came down drastically when compared to other States. Many of the major coconut oil traders/millers in different upcountry markets in India have their own establishments in the form of mill units, trading firms and dealership and commission agencies in and around Cochin City. The prices of coconut oil at Cochin are directly influenced by the prices in the Mumbai market, which is the centre of coconut oil prices in three major markets in India.

Coconut oil is an important cooking medium in the southern parts of the country, especially in Kerala. Besides, the oil has varied industrial applications. It is used in the manufacture of toilet soaps, laundry soaps, surface-active agents and detergents, hair tonics, cosmetics, etc. It is used throughout the country as hair oil, as it helps the growth of hair. As massage oil, it has a cooling effect on the body. Owing to these qualities, coconut oil has a potential market in the country. Since the price of coconut oil in the international market is very much lower than the domestic price, the quality and the attractiveness of consumer packs are important factors to compete in the world market. While the demand for coconut oil for cooking purpose is elastic, its demand as hair oil is inelastic.

Interestingly, the factors affecting the domestic availability of coconut oil in Kerala are quite different from those of Mumbai market. Even though, in Kerala, the wholesale prices of coconut

and coconut related products are moving in close sympathy with those of coconut oil and most of the volatility in prices of these products is associated with the unstable prices of coconut oil, which in turn depend on the changes in Mumbai market.

STATEMENT OF THE PROBLEM

India is the third largest producer of coconut in the world. However, the benefits of India being the largest supplier of coconut have been circumscribed by the declining terms/ share of trade in the world market due to the prevailing unequal higher domestic price. Although India enjoys a leading position in the supply, it has very little role in ruling the world coconut prices. In the wake of liberalization in 1991, India has emerged as one of the largest importers of palm oil from Malaysia. The virtual removal of Quantitative Restrictions in the EXIM policy has created conditions for stiff competition to the coconut oil amongst different cheaper oils, particularly palm oil.

Though coconut oil finds extensive uses in edible and non edible sectors, the coconut sector in India could exercise little market power owing to the availability of close substitutes. Therefore at present, the demand for coconut oil is highly price elastic. Apart from these, the institution of coconut oil futures has created a hedging mechanism to insulate millers and traders of coconut oil against deep and violent movements in coconut oil prices. In this context, the study tries to analyze the price trend of coconut oil in order to throw light in to the behavior of price movements of coconut oil.

OBJECTIVES OF THE STUDY

1. To analyze the price trend of coconut oil before and after liberalization on the basis of average yearly prices.
2. To evaluate the Average Annual Growth rate and Exponential Growth rate of coconut oil prices for pre-liberalization and post-liberalization period.
3. To assess whether there is any significant price variations between the three markets selected for the study during pre-liberalization and post-liberalization period.

Hypothesis

H0₁: There is no significant difference in the prices of coconut oil among Kochi, Alappuzha and Kozhikode markets during pre liberalization period.

H0₂: There is no significant difference in the prices of coconut oil among Kochi, Alappuzha and

Kozhikode markets during post-liberalization period.

RESEARCH METHODOLOGY

The study covers a period of 35 years from 1975-76 to 2010-2011, which has been divided into two - pre and post-Liberalization, period covering 15 years before and 20 years after 1990-91, the year of Liberalization. This is done with special reference to Kerala. Three major markets of Kerala namely Kochi, Alappuzha and Kozhikode have been selected for making a detailed study. The whole study was undertaken using the average yearly prices which have been collected from secondary data sources.

RESULTS & DISCUSSIONS

Table 1: Average Yearly Prices of Coconut Oil in Kerala in Pre- Liberalization Period (per quintal)

Year	Kochi	Alapp	Kozh
1975-76	969.11	963.69	956.82
1976-77	1017.88	1012.29	1006.08
1977-78	1073.25	1048.89	1054.22
1978-79	1166.75	1165.67	1176.83
1979-80	1152.75	1151.08	1155.50
1980-81	1514.00	1512.33	1512.00
1981-82	1391.92	1395.75	1397.75
1982-83	1425.00	1423.08	1425.50
1983-84	2074.17	2070.83	2074.25
1984-85	3319.42	3311.50	3300.27
1985-86	1976.58	1984.33	1977.17
1986-87	2149.33	2149.58	2142.83
1987-88	3054.08	3000.33	2976.33
1988-89	3159.83	3159.42	3146.58
1989-90	2415.17	2413.25	2422.92
1990-91	2726.83	2720.83	2713.58

Source: Coconut Development Board, Ministry of Agriculture, Dept. of Agriculture and Co-operation, Govt. of India, Kera Bhavan, Kochi.

As per the table1, the coconut oil prices show a very high increasing growth rate in the pre-Liberalization period i.e. 15 years before liberalization. The price of oil in all the three markets has registered an almost equal growth rate and it was more than 10 per cent in terms of Average Annual Growth. There seems to be fewer downward fluctuations in the price of coconut oil in all the three markets. Among the three markets, Kochi market has got the highest average annual growth rate when compared to the other two markets.

Table 2: Descriptives Statistics of the coconut oil prices during the pre-liberalization

	Mean	Std. Deviation	Min	Max
kochi	1857.2827	816.22961	969.11	3319.42
alapp	1850.8013	812.23342	963.69	3311.50
Kozh	1848.3367	806.71854	956.82	3300.27
Total	1852.1402	793.08263	956.82	3319.42

Source: Compiled from secondary data

Table 2 deals with descriptive statistics computed from the average yearly pre-liberalisation prices. As per the statistics, all the three markets have 15 observation prices and among them, the maximum price is 3319.42 at Kochi and the minimum price is 956.82 at Kozhikode market. When it comes to the mean price and standard deviation, kochi has got the highest mean and SD followed by Alappuzha and Kozhikode.

Table 3: Average Yearly Prices of Coconut Oil in Kerala in Post- Liberalization Period (per quintal)

Year	Kochi	Alapp	Kozh
1991-92	4183.83	4032.83	4065.75
1992-93	4541.83	4565.58	4644.17
1993-94	3914.00	3951.08	4082.92
1994-95	3233.50	3248.08	3422.17
1995 -96	3460.25	3468.92	3602.58
1996-97	4455.75	4440.83	4578.58
1997-98	5258.75	5232.17	5411.25
1998-99	4403.33	4419.33	4584.58
1999-00	5445.50	5444.58	5587.75
2000-01	3446.83	3441.67	3741.92
2001-02	3102.75	3106.42	3315.25
2002-03	4351.75	4316.08	4465.50
2003-04	5862.83	5858.58	5972.08
2004-05	6629.27	6590.17	6704.83
2005-06	5612.92	5622.50	5645.08
2006-07	4965.70	4941.57	4980.88
2007-08	4869.67	4869.00	4865.00
2008-09	6011.60	6008.00	6109.00
2009-10	4907.00	4912.00	4979.00
2010-11	5886.00	5869.00	6025.00

Source: Coconut Development Board, Ministry of Agriculture, Dept. of Agriculture and Co-operation, Govt. of India, Kera Bhavan, Kochi.

As per the Table 3, there has not any encouraging trend in the coconut oil prices in the post-Liberalization period. The trend in the price of coconut oil in the post-Liberalization period has

been very discouraging and it has far reaching consequences in the cultivation of coconut. There has been much less growth rate in the price of coconut oil in all the three markets. There was a very high downward fluctuation in the price of coconut oil in the post-Liberalization period in some years. From the above Table, it is very clear that in the post-Liberalization period, there has been an average annual growth rate of almost 4% - 4.2% in all the three markets of Kerala. This is much less when compared to the post-Liberalization period.

Table 4: Descriptives Statistics of the coconut oil prices during the post-liberalization

	Mean	Std. Deviation	Min	Max
kochi	4727.1530	1000.45960	3102.75	6629.27
alapp	4716.9195	996.60338	3106.42	6590.17
Kozh	4839.1645	970.73159	3315.25	6704.83
Total	4761.0790	974.04156	3102.75	6704.83

Source: Compiled from secondary data

Table 4 shows the descriptive statistics computed from the average yearly post-liberalization prices. As per the statistics, 20 observation prices were selected from each market and among them; the maximum price is at Kozhikode i.e. 6704.83 and the minimum price is at Kochi market i.e. 3102.75. When it comes to the mean price, Kozhikode has got the highest mean followed by Kochi and Alappuzha. Also Kochi has got the highest variations in prices with a standard deviation of 1000.46 at a standard error of 223.71.

Table 5: Comparison of Growth rates before and after liberalization

Average Annual Growth Rate	Kochi	Alapp	Kozh
Pre-Lib	10.16	10.12	10.10
Post-Lib	4.01	4.17	4.08
Exponential Growth Rate			
Pre-Lib	8.2	8.2	8.2
Post-Lib	2.1	2.1	2.0

Source: Compiled from secondary data

Table 5 shows the comparison of growth rate of coconut oil price in the three markets in the pre and post-liberalization period. In both calculations, the price of coconut oil shows a sharp decline in the growth rate in the post-liberalization compared to pre-liberalization. In the case of average growth rate, it was about 10 percent in pre-liberalization period, which declined to about 4 percent in post liberalization period. In the case of exponential growth rate, three markets have the growth rate of nearly 8 per cent in the pre-liberalization period but in the post-Liberalization period the same was nearly 2 per cent. This shows that the coconut economy of Kerala has suffered a lot due to the New Economic Policy of Liberalization.

Price Variation of Coconut Oil in the Pre-Liberalization Period (One-Way ANOVA)

Table 6: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	640.566	2	320.283	.000	1.000
Within Groups	27674482.045	42	658916.239		
Total	27675122.611	44			

Source: Compiled from secondary data

The One-Way ANOVA test was conducted to know whether there is any significant difference in the price of coconut oil among the three markets in the pre-Liberalisation period. The test result is given in Table 6. It is revealed that there is no significant difference in the price of coconut oil among the three markets–Kochi, Alappuzha and Kozhikode in the pre-Liberalisation period since the p value(1.000) is greater than 0.05.

H0₁ Accepted : There is no significant difference in the prices of coconut oil among Kochi, Alappuzha and Kozhikode markets during pre liberalization period as determined by one-way ANOVA *F(2,42), p = 1.000*.

Price Variation of Coconut Oil in the Post-Liberalisation Period (One-Way ANOVA)

Source: Compiled from Secondary data

The One-Way ANOVA test was conducted to know whether there is any significant difference in the price of coconut oil among the three markets in the post-liberalization period. The test result is given in Table 8. It is revealed that

Table 7: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	183967.605	2	91983.802	.094	.910
Within Groups	55792693.152	57	978819.178		
Total	55976660.756	59			

there is no significant difference in the price of coconut oil among the three markets–Kochi, Alappuzha and Kozhikode in the post-liberalization period since the p value(.910) is greater than 0.05.

H0₂ Accepted : There is no significant difference in the prices of coconut oil among Kochi, Alappuzha and Kozhikode markets during pre liberalization period as determined by one-way ANOVA - *F(2,57), p = .910*.

FINDINGS

- The price of coconut oil in the pre-Liberalization recorded a steep increase for the whole period from 1975 to 1991 in all the three markets.
- In the pre-Liberalization period, Kochi market has got the highest average annual growth rate when compared to the other two markets.
- The trend in the price of coconut oil in the post-Liberalization period has been very discouraging
- The coconut economy of Kerala has suffered a lot due to the New Economic Policy of Liberalization.
- The price of coconut oil shows a sharp decline in the growth rate in the post-liberalization compared to pre-liberalization.
- In the case of average annual growth rate, it was about 10 percent in pre-liberalization period, which declined to about 4 % in post liberalization period.
- In the case of exponential growth rate, three markets have the growth rate of nearly 8% in the pre-liberalization period but in the post-Liberalization period the same was nearly 2%.
- There is no significant difference in the prices of coconut oil among Kochi, Alappuzha and Kozhikode markets during

pre liberalization period as determined by one-way ANOVA $F(2,42)$, $p = 1.000$).

- There is no significant difference in the prices of coconut oil among Kochi, Alappuzha and Kozhikode markets during pre liberalization period as determined by one-way ANOVA - $F(2,57)$, $p = .910$).

SUGGESTIONS

It has been observed that the prices of coconut in the country are integrated with the price of coconut oil prevailing at Kochi market. However, variations in quality of matured coconut, size of nuts copra content marketing cost marketing methods of tender coconuts and matured coconuts are also deciding factors for the price received by the coconut farmers. The coconuts produced on farm and gardens move through many agencies like farmers or producers, collectors, middlemen, wholesalers and processors, before reaching the consumer in various forms. The involvement of these agencies and number of agencies participated in the marketing channels are also deciding factors of coconut prices. So in order to control the price fluctuation in the coconut oil, all these factors are to be considered.

CONCLUSION

The study has made an attempt to study the price fluctuation of coconut oil, in the Kochi, Alappuzha and Kozhikode markets. In the post-Liberalization period the coconut products were adversely affected by the reforms related changes. Their prices crashed and almost fifty per cent decline in the growth rate of price. The fluctuation in the prices of coconut oil was very severe in the post-Liberalization period. So it can be concluded that the Liberalization adversely affected the price of the coconut oil in Kerala.

The prices of coconut and its products in the country are mainly centered around two major coconut products viz, copra and coconut oil. The price of coconut is usually influenced by the price of coconut oil prevailing in the wholesale markets. However, the coconut oil prices are characterized by wide and violent fluctuation and erratic price

trend. The factors that determine the price of coconut and coconut products are also associated with the growers, oil mill industry and consumers. The prices therefore, should be attractive to farmers so that they continue to invest and undertake coconut farming for their prospective growth and remunerative to the product based industry for its survival.

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