

Factors Influencing People's Choice of Virgin Coconut Oil; A Value-Added Product of Coconut

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Abstract : *The coconut palm, also known as the “tree of heaven,” is a major commercial crop in tropical areas. And it exerts a powerful influence on the rural economies of many states and provides sustenance to more than 10 million people directly or indirectly. Several factors determine the value of Coconut. One of the main factors is the demand for value-added products made from Coconut. The purpose of this study is to investigate the factors influencing people's choice of virgin coconut oil—a value-added product of Coconut. To achieve this objective, a sample of 101 respondents was collected in the Ernakulum district in Kerala by a convenient sampling method, and the results were analyzed with the help of the statistical tool SPSS. The results indicated that the independent variables such as price, product quality, availability, and health benefits have a positive impact on the purchase intention of virgin coconut oil.*

Keywords: Virgin coconut oil, Value-added products, Rural economies. Health benefits

1. INTRODUCTION

India is one of the leading global producers and exporters of coconuts, contributing approximately 34% to global production in 2020–21. The coconut industry significantly supports the national economy, adding an estimated ¹ 307,498 million (US\$3.88 billion) to India's GDP. Coconut cultivation is a vital livelihood source, providing food and employment to over 12 million individuals. Furthermore, it sustains over 15,000 coir-based industries, employing around 600,000 people. In 2020–21, India achieved an average yield of 9,687 coconuts per hectare, ranking among the highest in the world. However, despite this impressive production capacity, only 2% of the total coconut output was utilized for value-added and industrial applications. Enhancing value addition in agriculture can significantly boost farm income, generate rural employment, stabilize crop prices during periods of surplus, and extend the shelf life of agricultural produce. Kerala is one of the key states where coconuts are a principal crop. However, coconut farmers in the region face numerous challenges, with one of the most pressing issues being the persistent decline in coconut prices. This price volatility is attributed mainly to the limited scope of value addition. In Kerala, coconut prices are heavily influenced by fluctuations in the price of coconut oil. Even minor shifts in oil prices tend to cause immediate changes in coconut prices. Approximately 70% of mature coconuts harvested in Kerala are converted into copra, with nearly 80% of this copra used for oil extraction. The remaining quantity, including ball copra, is transported to other states. One effective strategy to improve the livelihoods of coconut farmers is to promote the production of value-added coconut products. This approach can help diversify market demand, attract a broader consumer base, and ultimately enhance farmers' incomes.

2. REVIEW OF LITERATURE

K.N. Ushadevi and Sachu Zachariah John (2018) The study looked at how much people know about and use virgin coconut oil (VCO) in three districts of Kerala – Kozhikode, Ernakulam and Trivandrum showed a strong market for VCO, and businesses can benefit from this opportunity. Improper or widely distributed products might cause differences in brand awareness and preferences in different areas.

Agarwal RK, Bosco SJD (2017) The study carefully examined how virgin coconut oil (VCO) is extracted using different centrifuge speeds, temperatures, and time settings. Several methods are used for extraction, with cold and hot extraction being the most widely practiced. In the hot extraction method, freshly ground coconut is first pressed to extract coconut milk, which is subsequently exposed to high temperatures for further processing. This can reduce some essential nutrients. Cold extraction doesn't use heat

and involves methods like fermentation, chilling and thawing, centrifugation, or enzyme use to separate the oil. Although hot extraction can give more oil, it may lose some nutrients compared to the cold method.

Salomy et al. (2019) studied how it is marketed, focusing only on its use as a “functional food”-something that offers health benefits. After looking at different factors, the study found a gap between how much people want the product and how much is available. This gap can be an opportunity if the product is appropriately introduced, promoted, and made readily available in stores like supermarkets and department stores.

A.M. Marina et al. (2009) found that virgin coconut oil (VCO) has become popular among the general public and researchers as a healthy oil. Studies have shown that VCO has more health benefits than refined coconut oil, including higher antioxidant levels. Researchers have also worked on finding ways to detect if VCO has been mixed with other oils. This growing knowledge has helped create better methods to tell VCO apart from other oils, especially refined coconut oil.

3. SIGNIFICANCE OF THE STUDY

This study is significant as it addresses the increasing need for value addition in agricultural products, particularly in the coconut industry. In many rural areas, farm products are typically sold in their raw form, which often results in minimal income for farmers. By exploring the potential of value-added products such as Virgin Coconut Oil (VCO), this research highlights an opportunity to enhance the profitability and sustainability of farming enterprises. Virgin Coconut Oil has gained popularity locally and internationally due to its numerous health benefits and versatile applications in food, cosmetics, and wellness products. As a high-value product, VCO holds great potential to improve the livelihoods of coconut farmers, stimulate local economies, and create additional employment opportunities in rural communities through processing and marketing activities. Understanding the factors that influence consumer behavior towards VCO is essential for this product's successful development and promotion. This study aims to identify consumers' motivations, preferences, and usage patterns with regard to Virgin Coconut Oil. The findings can be instrumental for marketers, producers, and policymakers to design effective marketing strategies, improve product positioning, and align production with market demand.

4. STATEMENT OF THE PROBLEM

Kerala, the land of coconuts, is the leading producer of coconuts in the country. The state contributes 45% of the area under coconut cultivation and 38% of total coconut production in the country. Almost 42 lakh farmers are engaged in coconut cultivation in the state. During 2021, coconut experienced an unprecedented price fall for various reasons. Coconut cultivation in Kerala mainly revolves around producing copra and coconut oil. In the country, almost 88% of the coconut produced is used for copra making, and 92% of the copra is used for making coconut oil. Hence, any price fall in coconut oil is directly transmitted to copra, causing a fall in the price of coconut oil. One possible solution is encouraging and promoting value-added coconut products besides copra and coconut oil. Based on the problem mentioned above, the study addresses the following research questions:

1. Why do people choose Virgin coconut oil?
2. What factors influence the choice of virgin coconut oil?

5. OBJECTIVES OF THE STUDY

1. To analyze the demographic profile of respondents using virgin coconut oil
2. To critically evaluate customers' intention behind the purchase of virgin coconut oil.

6. HYPOTHESIS OF THE STUDY

H01: There is no significant relationship between Price and Purchase intention

H02: There is no significant relationship between Product Quality and Purchase intention

H03: There is no significant relationship between Availability and Purchase intention

H04: There is no significant relationship between Health Benefits and Purchase intention

7. RESEARCH METHODOLOGY

This study was conducted through a survey method, which collected primary data from 225 consumers who use Virgin Coconut Oil through a questionnaire. This empirical study collected data from various parts of Kerala's Kottayam and Alappuzha districts. The questionnaires were prepared with the help of Google Forms, which was circulated among the respondents through their e-mail addresses for easy data collection. Of the 225 questionnaires distributed to only 125 respondents, 101 responses were finally chosen for the research after verifying completeness and accuracy. The study adopted pre-existing scales, which were modified to suit this research's requirements. A five-point Likert with “1” indicating Strongly Disagree and “5” Strongly Agree was used to grade the various measures of the study.

8. DATA ANALYSIS AND INTERPRETATION

Table 1: Demographic profile of the respondent

Demographic	Frequency	Percent
Age		
Upto 25	24	23.8%
26-35	34	33.7%
36-45	28	27.7%
Above 45	15	14.9%
Gender		
Male	37	36.6%
Female	64	63.4%
Educational Qualification		
Primary Education	11	10.9%
SSLC	9	8.9%
HSC	9	8.9%
Degree	19	18.8%
PG & Above	53	52.5%
Occupation		
Business	30	29.7%
Self employed	4	3.9%
Professional	42	41.5%
Agriculturalist	6	5.9%
Student	9	8.9%
Housewife	10	9.9%
Monthly Income		
Less than 10,000	24	23.8%
10,000 - 25,000	21	20.7%
26,000 - 40,000	37	36.6%
41,000 - 55,000	7	6.9%
Above 55,000	12	11.9%

8.1 Sample Characteristics

The demographic profile of the respondents indicated that out of the 101 respondents, 36.6 percent are males and 63.4 percent are females. The age group depicts that most respondents are between the age group of 26–35 years (33.7 percent), which implies that middle-aged females are well aware of the user benefits of VCO. The educational qualification of the respondent group was post-graduation at 52.5 percent, and the occupational status indicates that most of them are working professionals at 41.5 percent. The monthly income of 36.6 percent of respondents was between 26,000 – 40,000. Thus, the demographic status of the respondents concludes that females within the age group of 26–35 years who are working professionals with a monthly income of 26,000-40,000 and have post-graduate educational qualifications use Virgin Coconut oil more regularly.

8.2 Measurement Item and Model Validation

A reliability test was conducted using Cronbach's Alpha to assess the reliability of the research instruments. This test checks if the items used in the study consistently measure what they are supposed to. All four factors had Alpha values higher than 0.70, the minimum value Nunnally recommended (1978). This means the scale used in the study is reliable and consistent.

A regression analysis was also performed to understand how Price, Product Quality, Availability, and Health Benefits affect people's intention to buy virgin coconut oil. In this analysis, the independent variables (the factors being tested) were Price, Product Quality, Availability, and Health Benefits, while the dependent variable (the one being influenced) was Purchase Intention. Regression analysis aims to see how changes in the independent variables can explain changes in the dependent variable. When more than one independent variable is used, it's called multiple regression. The results of this analysis were used to test the research hypotheses.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	.696	.485	.464	.61216	1.867

a. Predictors: (Constant), PR, PQ, AV, HB

R-squared represents the percentage of variance in the dependent variable that is explained, either individually or collectively, by the independent variables. When the model includes only a few independent variables, the values of R-squared and Adjusted R-squared tend to be very close. In Table 2, both statistics are nearly identical, indicating minimal adjustment for the number of predictors. Therefore, the Adjusted R-squared is used to interpret the model's explanatory power.

As shown in Table 2, the variables PR, PQ, AV, and HB collectively account for 61.216% of the variation in PI, suggesting a strong explanatory relationship. The Durbin-Watson statistic, which tests for autocorrelation in the residuals, has a value of 1.867. According to Garson (2010), values between 1.5 and 2.5 suggest that the observations are independent. Thus, the result indicates that there is no significant autocorrelation present in the data.

Table.3 : ANOVA table Showing the Regression Model Fit

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	33.881	4	8.470	22.603	.000
	Residual	35.975	96	.375		
	Total	69.856	100			

a. Dependent Variable: PI

b. Predictors: (Constant), PR, PQ, AV, and HB

**denotes significant at 1 percent level.

ANOVA table showing the regression model fit presented in Table 3 shows that the model is statistically significant at a 1 percent significance level ($F=22.603$).

Table 4: Coefficient of regression analysis

Factor (Constructs)	Item Acronym	Standardized Beta Coefficient (B)	Sig.(p Value)
Price	PR	.385	.000**
Product Quality	PQ	.258	.002*
Availability	AV	.241	.004*
Health Habits	HB	.358	.000**

Source: Compiled by the Researcher

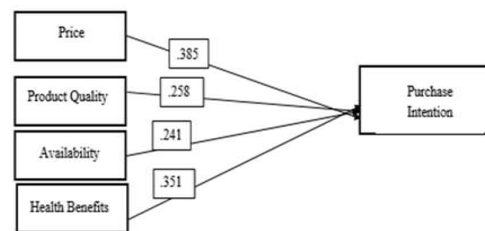
** Denotes significance at 1per cent level

*Denotes significance at 5per cent level

Table 8.8 shows the standardized Beta values and significance levels for the independent variables: Price, Product Quality, Availability, and Health Benefits. The results indicate that Price (PR) and Health Benefits (HB) are highly significant at the 1% level, while Product Quality (PQ) and Availability (AV) are also significant but at the 5% level. This means all four factors have a meaningful and positive impact on Purchase Intention. As a result, the hypotheses H01, H02, H03, and H04 are rejected.

The Beta coefficients show how much each factor contributes to the overall model. A higher Beta value means that the variable has a more substantial influence on the dependent variable. Price (PR) has the most significant impact among the four, followed by Health Benefits (HB).

Figure 1: Validated Model



Source: Compiled by the Researcher based on the Hypothesis tested

As illustrated in Figure 1, the empirically validated model highlights price as the most influential factor, demonstrating the highest standardized beta coefficient ($\beta = 0.385$). This is closely followed by Health Benefits ($\beta = 0.358$). Both variables exhibit a statistically significant impact at the 1% significance level ($p < 0.01$), suggesting a strong and reliable influence on consumer behavior. Moreover, Product Quality and Availability also contribute significantly to the model, with their effects being statistically significant at the 5% level ($p < 0.05$). These findings underscore the relative importance of these factors in shaping consumer decisions, with price and perceived health benefits emerging as the most critical determinants.

9. FINDING OF THE STUDY

The significant findings of this study add value to both the industrial and academic fraternity. The results of this study indicate that price is the most influencing factor in the choice of a virgin coconut oil brand. As it is very clear

from the consumer behaviour of FMCG goods, consumers prefer price over any other product attribute. Respondents believe virgin coconut oil is reasonably priced and has excellent value for money. Besides the price, the health benefits of virgin coconut oil are the next most influential factor. As per the traditional customs of South Indians, virgin coconut oils were homemade for application to newborn babies and widely used for beauty care. The findings of this study also indicated that the consumers of virgin coconut oil are females than males. Thus, it can be concluded that middle-aged women are well aware of the health benefits of virgin coconut oil, and it contributes to their purchase intention. While analyzing the availability of virgin coconut oil, respondents viewed it as readily available in the market. Various brands are available in the market; thus, customers don't feel out of stock of virgin coconut oil. Per the respondents' opinions, the product quality of virgin coconut oil is considered adequate and reasonable. Most of the respondents tend to buy only branded oils. The findings of this research indicated that virgin coconut oils are suitable for the health of human beings; thus, there is a vast market for virgin coconut oil. Therefore, coconut farmers have a good option to improve their cultivation and the production of value-added products from coconuts, such as virgin coconut oil.

10. CONCLUSION

To effectively attract more consumers and secure a larger share of the virgin coconut oil (VCO) market, businesses must have a thorough understanding of the factors that influence purchasing decisions. This study identified four key determinants: Price, quality, availability, and perceived health benefits. The findings reveal that each of these factors positively influences consumers' intention to purchase VCO, with quality and health benefits emerging as the most significant drivers.

Furthermore, the research highlights several critical aspects that affect the overall quality of VCO. These include the condition of the raw coconuts, the storage practices employed, and the specific extraction method used during production. While various techniques exist for producing VCO, all generally yield products that meet established quality standards. Notably, the fresh-dry method resulted in the highest oil yield; however, the fermentation method produced oil with superior overall quality, particularly in terms of clarity, aroma, and purity. In conclusion, for businesses aiming to enhance consumer appeal and market competitiveness, prioritizing product quality and emphasizing health benefits—while maintaining efficiency in production—will be key strategies for success in the VCO industry.

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