

## The impact of coconut price increment on household consumption in 2020- A study in Panadura area

L.B.R. Prasadini<sup>1\*</sup>, K.K.A. Kiriveldeniya<sup>1</sup>, P. Wattage<sup>2</sup>

<sup>1</sup> Department of Agribusiness Management, Faculty of Agricultural Sciences, Sabaragamuwa University of Sri Lanka, P.O. Box 02, Belihuloya, Sri Lanka

<sup>2</sup> Centre for Economics and Management of Aquatic Resources, Portsmouth Business School, University of Portsmouth, United Kingdom

\* rashmikaprasadini@gmail.com

### 1. Introduction

Coconut, *Cocos nucifera* is one of the most consumed domestic plantation crops in Sri Lanka. Further, rainfall and temperature are the major two climatic factors influencing the coconut yield (Peiris, et al., 1995). Non-economic factors including; dietary concerns, changes in tastes and preferences also impact coconut demand (Samarajeewa, 2002). As a plantation crop, coconut holds a significant place in the Sri Lankan economy for being one of the top three and as a major export crop. Statistical Information on Plantation Crops 2018 shows from the annual nut production, domestic nut consumption is 68.39% and the rest of the 31.61% is used for various other productions and purposes e.g.: desiccated coconut, copra, coconut oil. Population growth has accelerated the demand for coconut but the supply continuously fails to address the prevailing demand (Kumari, 2021). As a result price fluctuation is prominent in the coconut industry. Compared to the past records, the year 2020 recorded the highest coconut retail price in Sri Lankan retail market causing people to go through some hardships during the purchase of fresh coconut and coconut oil. This year government imposed new policies (Circumference below 12 inches LKR 60.00 and Circumference between 12-13 inches 65.00 Circumference over 13 inches LKR70.00) to calculate the coconut price and from that, both consumers and retail shop owners also faced many hardships. Therefore, this research aimed to observe how the coconut price increment impacts on household consumption and to identify the changes made by the consumers. As well as to determine how the socio-economics of consumers affect the consumption pattern during a price hike situation of coconut.

### 2. Materials and Methods

The study was carried out in Panadura municipal council area with 100 participants. Simple random sampling method was adopted in the selection of the study sample. Due to the pandemic situation, respondents were approached by circulating an online google form via emails and social media platforms. The main objective was to identify how the coconut price increment impacts on household consumption in 2020. One of the specific objectives was to identify whether the price hike caused a shift in consumption patterns from fresh coconut to coconut milk powder or liquid coconut milk. Based on the research questions formulated in this study descriptive analysis was conducted to achieve this objective. Another objective was to determine the relationship between socio-economic factors income and number of family members with the change of coconut consumption pattern. Monthly coconut consumption was identified as the dependent variable whereas monthly income, the number of family members and the average price of coconut were considered as the independent variables. Multiple regression analysis was carried out to measure the relationship between each variable.

### 3. Results and Discussion

In the descriptive test results, 52 percent of consumers indicated that they had limited the household consumption with the price hike and 42 percent continued the same consumption

level despite the price hike. Further, 23 percent of the consumers expressed that they substituted the consumption of fresh coconut with coconut milk powder due to both price increment and limited availability of fresh coconut. However, 77 percent of consumers remained to consume fresh coconut as they were able to afford the increased market price and they prefer fresh coconut taste to coconut milk powder/coconut liquid milk. 47 percent of respondents were self-sufficient with their own palm production.

Under the second objective, the relationship between socio-economic factors with the price increment of coconut was determined through the multiple regression analysis.

**Table 01. Coefficient of the regression analysis**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1914.414	451.662		4.239	0.000		
1 Number of family members	0339.351	046.755	0.476	7.258	0.000	.614	1.628
Monthly income	0000.011	000.003	0.222	3.732	0.000	.749	1.335
Average price of a coconut	-0018.923	003.594	-0.343	-5.265	0.000	.623	1.604

a. Dependent Variable: The monthly expenditure for the consumption of coconuts

R square value of the model was determined as 0.746 and the  $P < 0.05$ . Table 01 shows the results of multiple linear regression. The dependent variable is monthly expenditure for the consumption of coconut and the independent variables are the number of family members, monthly income, and average price of a coconut. According to the above results, all the independent variables have significant impact on the monthly expenditure for consumption of coconut since p values are less than 0.05 significant level. The number of family members and the monthly income has a positive relationship with monthly expenditure for coconut consumption whereas the average price of a coconut has a negative relationship with monthly expenditure for coconut consumption. After considering all the above data and the results, the final equation for the model can be interpreted as;

“Coconut consumption = 1914.414 +339.351 (Family members) + 0.011 (Monthly Income) - 18.923 (Price of a coconut)”.

#### 4. Conclusions

The results of the study conclude that the consumers have not completely shifted for coconut milk powder or liquid coconut milk but only 23 percent due to the coconut price increment and the other 77% percent remained to consume fresh coconut as they were able to afford the increased market price and they prefer fresh coconut taste to coconut milk powder/coconut liquid milk. It indicates that consumers still choose to consume fresh coconut even though the price fluctuates from time to time. Monthly household coconut consumption depends on monthly household income, the number of family members, and the average price of a coconut. When the average price of coconut increases the monthly coconut consumption has decreased whereas the monthly income is high, monthly coconut consumption is high. When the number of family members increases the monthly coconut consumption increases simultaneously.

## 5. References

- Bandara, J., & Thakshila. K. (2021). Factors Affecting Coconut Price Determinants in Sri Lanka: An Integrative Review. 61-71.
- Peiris, T. S. G., Thattil, R. O., & Mahindapala, R. (1995). An analysis of the effect of climate and weather on coconut (*Cocos nucifera*), *Journal of Experimental Agriculture*, 31(4), 451–460.
- Samarajeewa, S. R. (2002). ‘An Econometric Analysis of Consumer Demand for Coconuts in Sri Lanka’, *CORD*, 18(02), 34.