Consumer Demand and Attitude towards Value Added Teas in Gampaha District of Sri Lanka

H.M.S MANJULA[1] and K.G.M.C.P.B GAJANAYAKE[1]

[1]*Department of Plantation Management, Faculty of Agriculture and Plantation Management, Wayamba University of Sri Lanka, Makandura, Gonawila (NWP).*

ABSTRACT

Tea is the most accepted traditional beverage in Sri Lanka and nine percent of the total production is consumed domestically. Many companies are involving in the process of marketing of value added teas in the domestic market with different brand names. Understanding the value, placed by the domestic consumers on quality attributes and demand for value added teas is a key factor for competitive marketing strategy.

This study was done to find out the consumer demand for the value added teas and their attitude towards various quality attributes of teas consumed. Further, the changes of per capita consumption of tea for last 20 years, was analysed using secondary data. Survey was conducted with structured questionnaires to collect primary data.

Regression analysis was done to estimate the quantity of value added tea purchased by an average urban consumers of Gampaha district in terms of price of the value added tea, household income, age, gender, level of education, family size and different types of tea *viz.* tea in packets, tea in bags and flavoured tea. Likert scale was used to find out the attitude. The study showed that the quantity demanded for value added tea depends on price of 100 g of value added tea, income, family size and type of tea. Results further revealed that the strength was the most important quality attribute followed by the flavour and aroma. The per capita consumption of tea of an average Sri Lankan consumer showed an increasing trend from year 1999.

KEY WORDS: Value added tea, Consumer attitude, Quality attributes, Demand

INTRODUCTION

Tea is the most popular natural beverage consumed throughout the world next to water. In Sri Lanka it has been the most accepted traditional beverage since time immemorial. Sri Lanka started tea production in year 1883 and at present, grabs remarkable position in the beverage market. As well as it has accounted for 13 percent of Sri Lanka's merchandise exports and earned US $ 682 million in year 2003 (Anon, 2004a)

Many of the producing countries except China and India consume very little of the product, while other countries import large quantities for domestic consumption (Ali *et al,* 1997). Sri Lankans generally consume 36 million cups of tea on daily basis (Anon 2002). In year 2003, the domestic market for tea in Sri Lanka was estimated as 27.5 million kgs. This amount represented 9% of the total production. Per capita consumption of tea in Sri Lanka, which is 1.28 kg/year (Anon 2004b), appears to be remaining at a moderate level compared to other countries.

In the domestic tea market "dust" is the most widely used tea grade, particularly in boutiques and catering trade. This grade is more popular as it gives a higher number of tea cups per unit quantity, compared to other grades available in domestic market. Value addition in the tea sector is largely confined to preparation, packaging and the presentation of the harvest for the consumer market, with the aim of enhancing the unit value realization (Sivaram, 2000). At present, most value added teas available in the domestic market in different brand names consist of grade "dust", blended with high quality grades, mostly Broken Orange Pekoe (BOP) (Wickramasinghe, 1986). In addition to blended teas, single origin (unblended) teas are also available in value added forms in supermarkets in different brand names, targeting more affluent consumers in urban areas. In the year 2002, five million kilograms of tea were sold as tea packets and tea bags (value-added tea) in the domestic market (Anon, 2002). A remarkable gap exists between total tea consumption and value-added tea consumption resembling that most of the Sri Lankan consumers are consuming loose teas in non-value added forms.

However, it is important to point out that value-addition can hardly be achieved without some degree of cost-addition. The cost elements *viz.* packaging, selling, transporting, local taxes, margins for stockists, distributing, retailing, etc. will vary depending on whether the produce is to be sold in the local market or export market. All these elements in association with the capital cost of machinery, employment of marketing specialists and expenses on promotion and market intelligence could substantially uplift the cost of the final product compared to selling tea in non value-added forms (Sivaram, 2000). This is important to consider when offering of products at competitive price.

Therefore, more systematic studies on the local tea market would be advantageous. Presently supermarkets which are available throughout the country have won the attention of the society as many consumers prefer to purchase most of their consumables from these centres.

Tea does not have an intrinsic value as many other agricultural commodities. Price for tea is one of the key factors for the firms engaged in the business. It is a product traded on a regular basis and the price levels could vary depending upon the market forces prevailing by the time tea is introduced to the market. It will be useful initially to examine various factors, which determine the ultimate market price for tea. One important consideration is the demand situation at any given point of time. The demand situation is directly related to consumption pattern which in turn could be influenced by a number of causes such as socio-economical characters, demographic characteristics and consumer taste and preferences.

The various sensory and analytical quality attributes of tea that influence the consumer demand includes flavour, strength, aroma, colour, nutrient content, health benefits and brand name. The initial parameters mentioned above are sensory quality attributes of tea, which can easily be detected by the consumers. Nutrient content and health benefits are the analytical attributes that can be measured by laboratory testing. One sensory quality attribute which affect the flavour of tea is the combination of sensations, which is sensed by the consumer, once the beverage is tasted. Another important attribute is aroma, which in common parlance means smell of tea. Strength stands for the substances in a cup of tea, which imparts the body of the liquor. It is related with the thickness of the water extract. Colour is also considered as an outstanding sensory attribute. Ideally, liquor should be bright and clear when first poured, with a distinct reddish tinge.

In the economic world order brand promotion plays a powerful role in consumer products like tea. This trend is friendly for tea, where consumer awareness is becoming increasingly sensitive. While the trading sector in Sri Lanka has made rapid inroads into this area, the plantation companies are still grappling to put production back on track (Sivaram, 2000). As well as with the world discovering the new health virtues of tea, the attention of local consumer may be increased towards this beverage. This could be positioned tea against other beverages that appear dominant today.

Given this background, it is important for firms involving in value addition to realize the consumer demand, their preferences and various quality attributes of tea. Once the relative importance of quality attributes are understood, it would ultimately help value-added teas to be marketed through aggressive promotions to increase overall consumption and/or through firm specific advertisements to improve market share within the domestic market. The objective of this study is to estimate the quantity of value added tea purchased by an average urban consumers of Gampaha district, in terms of price of the value added tea, household income, age, gender, level of education, family size and different types of tea *viz.* tea in packets, tea in bags and flavoured tea. Further, the study tries to identify the attitude towards various quality attributes of tea consumed and changes of per capita consumption of tea for last 20 years by an average Sri Lankan consumer.

METHODOLOGY

A random sample of 84 consumers was selected from 12 supermarkets situated in six urban areas in Gampaha district. All the customers shopped these supermarkets were selected as the sample frame. All of the 84 respondents were interviewed from the month of May to June, 2005, during day time. Primary data were collected from these customers using pre-tested, structured questionnaires. Data on socio-economic characteristics of customers and their attitudes towards health, brand and liquor attributes of value-added teas available in the market were also collected.

According to Lipsey and Christal (1995), five main variables influencing the quantity demanded of a product could be identified *viz.* price of the product, price of other products, consumer income and wealth, various sociological factors and the consumer tastes. Based on the above factors, an econometric model for the consumer demand of value-added tea was fitted as follows.

$$Q_p = f\,(\text{PRT, ICH, GDR, FLS, AGE, DEL1, DEL2, DTP1, DTP2})$$

The dependent variable Q_p was defined as quantity of value-added tea demanded at given price level within the month. Independent variables were price of 100g of value-added tea purchased (PRT), household income (ICH), age (AGE), gender (GDR), family size (FLS), dummy variables for education level DEL1 and DEL2 and dummy variables for type of tea namely DTP1 and DTP2.

Psychometric "*Likert scale*" (Openheim, 1992) was used to measure the attitude of these respondents towards the selected attributes of tea *viz.* flavour, aroma, strength, colour, health benefit and nutrient content. Respondents were asked to rate various tea attributes with a rank of 1 for very important, and 5 for the least important. By calculating average scores, consumer attitude towards the attributes, namely strength, flavour, aroma, colour, health benefit and nutrient content were calculated.

Variation of per capita tea consumption of an average Sri Lankan consumer over time *i.e.* from 1984 to 2004 was analysed descriptively using secondary data gathered from annual report of Sri Lanka Tea Board.

RESULTS AND DISCUSSION

Ninety four percent of the respondents were consumers of value added teas. Of those, who drink value added teas, 86% consume in the morning as well as at night. Sixty two percent of them were consumed it only with milk. Thirty eight percent were consumed it more than two times per day. The average consumption of value added tea across all survey respondents was 120.06 g per month, resembling per capita consumption of 1.80 kg. This amount is higher than the mean per capita tea consumption in the country in year 2001 to 2003, which is 1.38 (Anon, 2004b). This may be due to higher per capita income of urban consumers who shop to supermarkets.

Demand Analysis for Value Added Tea

The linear model showed good statistical insight with the results consistent with the econometric model. Table 1 represents the results obtained in the estimation using SAS statistical software. The estimated model with the specified variables explained

84% of the variability of the value-added tea demand. Based on the estimated results, the demand of value-added tea in Gampaha district was significantly determined by the price of the tea, family income, family size and type of tea.

Table 1. Estimation of value added tea demand model

Variable	Estimated Coefficient	t-value	p-value
Constant	257.5299	4.34	<.0001*
PRT	-4.1620	-3.81	0.0003*
ICH	0.0047	5.76	<.0001*
FLS	65.8900	-0.46	<.0001*
AGE	-0.2002	1.75	0.6499
GEN	15.5177	11.40	0.0835
DEL1	12.2174	0.78	0.4396
DEL2	-12.7923	-1.37	0.1746
DTP1	143.0716	2.46	0.0163*
DTP2	238.0197	2.85	0.1057

R^2 = 0.8480, Adjusted R^2 = 0.8269 *Significant at 5%

Own price elasticity of value added tea was found to be -2.10. The price elasticity explains that when the unit price of value added tea is changed by one percent, the quantity demanded get changed by – 2.10 percent. Income elasticity or consumer income responsiveness was 0.077 which means, by 1 percent increase in consumer income, quantity demanded get increased by 0.077 percent.

Family size of the consumer showed, slope of 48.832 with the quantity of tea demanded, which means when family size of the consumer get increased by 1, the value added tea quantity demand increased by 48.8321. As for the type of teas, set the base (the case in which DTP1=DTP2=0) as tea packets. Compared with tea packet, consumer demand was high for the tea bags, as the coefficient of DTP1 is significant and positive.

Consumer Attitude towards Quality Attributes

According to the *"Likert scale"* (Table 2), strength was the most important attribute of value added teas, followed by flavour and aroma.

Table 2. Average importance of the attributes for survey respondent.

Attribute	Likert scale*
Strength	1.60
Flavour	1.82
Aroma	2.05
Colour	3.75
Brand name	3.95
Health benefit	4.30
Nutrient content	4.60

1=very important, 5=very unimportant

Given the fact that the Sri Lankans take tea with milk and sugar, colour might not be critical quality attribute. Brand also showed low importance which may be due to lower level of brand consciousness of the consumers. It may be an opportunity to the marketers for increasing market share for their own brand by establishing brand consciousness among consumers. This may be due to the minimum availability of information on health benefit from tea. This gives an opportunity to marketers to educate people on the importance of tea as a healthy and nutritive drink.

Domestic Consumption of Tea

Sri Lanka consumes 11,756 mt. of tea per year out of the total production with annual per capita consumption of 1.38 kg. The study revealed that during the past two decades (1984-2004) the average per capita consumption has shown decreasing trend. From year 1984 to 1992 per capita consumption has decreased from 1.45 kg to 1.27 kg. From 1992 to 1999 the level of tea consumption stagnated around 1.28 kg/capita. The growth of per capita tea consumption from 1999 to 2004 may be due to the growth of the per capita income and the stability of the socio economic structure of the country.

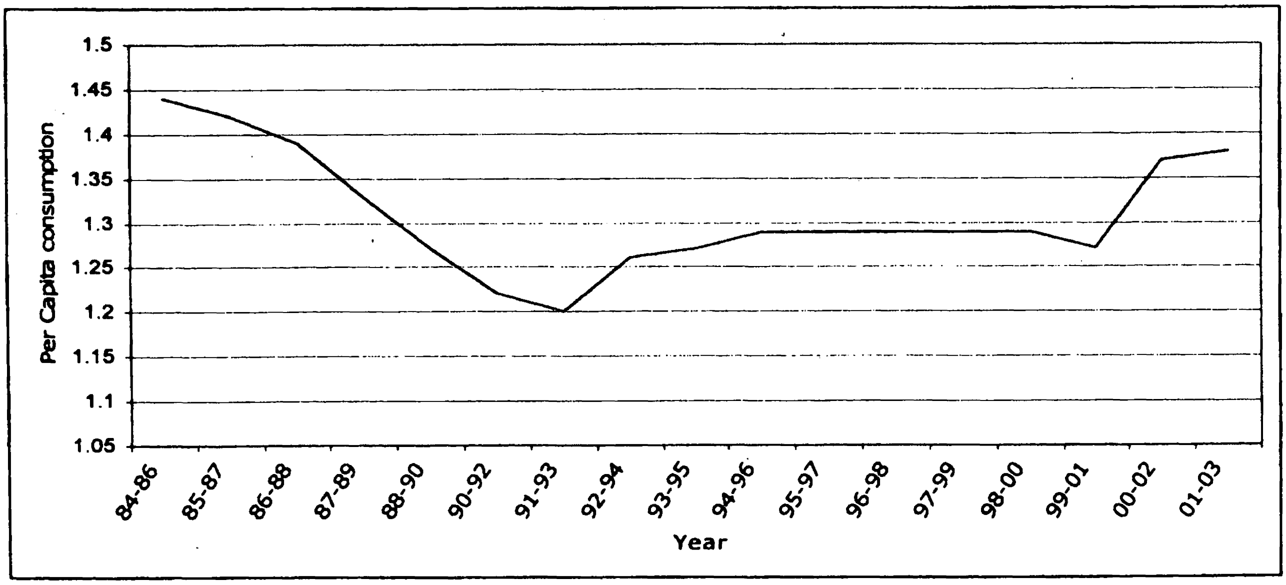

Figure1: Variation of per capita consumption in domestic market

CONCLUSIONS

The results of the study revealed that the Price, Income, Family and DTP1 were the significant factors that change the consumer demand of value added tea in Gampaha district.

Further the strength was the most important attribute followed by flavour and aroma identified by consumers. Colour, brand name, health benefit and nutrient content were identified as less important on average to the average consumers. From year 1999 the per capita consumption of tea have shown increasing trend.

ACKNOWLEDGEMENTS

Authors' special thanks go to Mr. J.C. Edirisinghe, Economist, Rubber Research Institute of Sri Lanka and Prof. C. Bogahawatte, Senior Professor, Department of Agricultural Economics, University of Peradeniya, for the immense support and guidance in conducting the study. Also wish to thank Mr. P. Sarukkali, The Director (Statistics) for providing necessary information and data.

Authors gratefully acknowledge the support of Prof. S.J.B.A. Jayasekara, Dean, Faculty of Agriculture and Plantation Management and Prof. N.E.M. Jayasekara, Head, Department of Plantation Management. Sincere thanks are also due to Dr. W.J.S.K. Weerakkody, The Director, Computer Unit, Wayamba University of Sri Lanka, Makandura, for the support during statistical analysis and compilation of this paper.

REFERENCES

Ali, R., Y.A. Choudhry and D.W. Lister (1997). Sri Lanka's tea industry: Succeeding in the Global Market, World Bank discussion paper no. 368, Washington, DC, pp.8-27.

Anon, (2004a). Annual Report, Central Bank of Sri Lanka, Colombo.

Anon, (2004b). Annual Report, Sri Lanka Tea Board, Colombo.

Anon, (2002). "John keels launch new tea brand." The Sunday Times, 15/03/2002.

Bogahawatta, C. and T.M. Marawila (1998) Export Demand Elasticities for Sri Lankan Tea, *Sri Lankan Journal of Agricultural Economics*. **35.** pp. 10-29.

Lipsey, R. G. and K.A Cristal (1995), An introduction to positive economics, Oxford University press, pp.62-69.

Oppenheim, A. N. (1992). Questionnaire Design, Interviewing and Attitude Measurement, Pinter Publishers, London, pp.45-49.

SAS, (1998). SAS/ETS user's guides for personnel computers, version 6, 4th ed. Cary, NC USA, SAS institute Inc.

Sivaram, B. (2000), Plantation Management in the New Millennium, National Institute of Plantation Management, Athurugiriya. pp.519-521.

Wickramasinghe, R. L. (1986), Monographs on tea production in Sri Lanka, Tea Research Institute of Sri Lanka, Talawakale, pp.210-211.