

Impact of Tea Brokers' Advisory Services on Financial Performance of Tea Manufacturers

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Abstract – 75% of the tea manufacturers in all 03 tea grown regions in Sri Lanka rely on manufacturing advisory service and special muster-reporting service provided by tea brokers. Nearly 90% of all tea manufacturers use information and guidelines given in muster-reports to improve their teas. Majority of tea manufacturers (75%) visit their respective tea brokers to seek advice on how to manufacture a better produce. Pearson's Correlation Analysis was employed for determination of the impact of tea brokers' advisory services on financial performance of tea manufacturer. There is a positive correlation between Net Sale Average (Pearson's Correlation constant 0.551), Variation (Net Sale Average vs Elevation Average) (Pearson's Correlation constant 0.590), Cost of Production (Pearson's Correlation constant 0.258), Profitability (Pearson's Correlation constant 0.459), Capital Acquisition (Pearson's Correlation constant 0.035) and Level of Implementation of tea Brokers' Advisory Services whereas there is not enough evidence to prove existence of a correlation between Capital Acquisition of a tea manufacturer and level of implementation of tea brokers' advisory services at a significance level of 0.05.

Keywords – Tea, Manufacturer, Broker, Financial Performance.

I. INTRODUCTION

Sri Lanka is renowned for its high quality tea and as the 3rd biggest tea producing country globally, has a production share of 9% in the international sphere, and one of the world's leading exporters with a share of around 23% of the global demand [1].

The Tea grown in Sri Lanka is classified in to three different elevation zones. Teas that are grown in the Badulla and NuwaraEliya districts generally fall above 1200 m elevation, and is known as High grown (Up country Teas). Low grown (Low country Teas) are generally cultivated below 600 m elevation and found mainly in Galle, Matara, Ratnapura, Kegalle and Kalutara districts. Kandy and Matale districts fall in to the middle-elevation zone (600 and 1200 m) and Teas that are grown are known as Mid grown or Mid country Tea [2].

There are basically two distinguishable parties of Tea Manufacturers in Sri Lankan Tea industry as estate sector and Tea small holdings sector. According to the Tea Control Act No. 51 of 1957, agricultural holdings below 10 acres are considered Tea Small Holdings. Currently, an approximated volume of 72% of total Tea production in Sri Lanka comes from the small holdings sector and the balance is supplied by the estate sector. Although the production of the holdings sector is higher, the small holders in total occupy a lower percentage of land under Tea cultivation than the corporate plantation sector [3].

In tea industry, tea broker is involved in selling of tea on behalf of tea manufacturer. Broker is a key link in supply chain and it is broker who bridges the connection between tea producer and trader. Every tea manufacturer needs a broker in order to sell their teas at the auction. As quoted from reference [4], "Tea broker plays an integral role in the marketing of tea on behalf of tea manufacturer. Bringing tea buyers and manufacturers together is the prime responsibility of tea broker".

Apart from performing the role of a marketing agent, providing manufacturing advisory services is one of the most important services rendered by tea brokers to tea manufacturers. It creates the flow of necessary know-how and market information to tea manufacturers allowing them to produce teas to meet changing market demands [5].

When assessing financial status of a tea factory, Net Sale Average, Cost of Production and Capital Acquisition are the three most important components which should be considered. Also, Elevation Average (EA), the average price per kilogram of tea inatea grown region, is an important value in comparing the income of a factory and their individual performance.

Net Sale Average (NSA) refers to average price per kilogram of tea produced by a particular factory. It is calculated from the total proceeds gained by the factory for a month and dividing by the total quantity sold within that particular month. This price is useful in determining the profit margin of the factory. Therefore, it could be noted that analyzing factors affecting netsale average would help to have better understanding about the demand of the teas produced and the improvements that should be considered to be made [6].

Main objective of this research was to determine the impact of tea brokers' advisory services on financial performance of tea manufacturers. Specific objectives included studying the current situation of tea Brokers' advisory services, finding out constraints faced by tea manufacturers when implementing tea brokers' recommendations and identifying the correlation between Advisory Services and Financial Performance of tea manufacturers.

II. METHODOLOGY

This research was conducted with participation of 68 tea manufacturers representing all three tea grown regions in Sri Lanka. Stratified random sampling method was used to select a total of 68 respondents (10% from the whole population) under 3 strata from a population of 674 tea Manufacturers. Primary data collection was done by means of a pretested questionnaire and secondary data were mainly extracted from Colombo Brokers'

Association records for tea sales of year 2015 from January to June.

Pearson's correlation analysis was done in order to determine whether Net Sales Average, Cost of Production and Variation between Net Sales Average and Elevation Average of tea Manufacturers are correlated with use of advisory services provided by tea Brokers.

$$r = \frac{n \sum xy - \sum x \sum y}{\sqrt{(n \sum x^2 - (\sum x)^2)(n \sum y^2 - (\sum y)^2)}}$$

r – Coefficient of Correlation

x –Independent Variable x (Use of Advisory Services)

y – Dependent Variable y (Financial Performance Indicators)

Null Hypothesis: Financial performance of tea Manufacturer is not correlated with advisory services provided by tea Brokers.

Alternative Hypothesis: Financial performance of tea Manufacturer is correlated with advisory services provided by tea Brokers.

III. RESULTS AND DISCUSSION

There is clear indication that tea manufacturers consider Manufacturing Advisory Service as a valuable service since majority of tea manufacturers in Sri Lanka (73.5%) tend to request tea broker's special advisory services.

Majority of respondents (82%) agreed on the fact that use of Manufacturing Advisory Services has a positive effect on tea quality, which in turn improves tea prices. 13% of respondents believe that the use of Manufacturing Advisory Service does not have a significant impact on tea quality.

According to tea manufacturing advisors, two main approaches to increasing income of a tea factory are either producing better quality tea while compromising on the quantity or producing a higher quantity of tea compromising on the quality. Maintaining quality and quantity consistent is a challenge for every tea manufacturer. Considering the market situation and demand trends, manufacturing Advisors decide whether to focus on quality improvement or quantity increment when providing manufacturing consultancy.

A high majority of 92% agreed upon the statement that Manufacturing Advisors possess higher expertise and knowledge in tea manufacture than the original tea producer. Manufacturing advisors employed by tea brokers are generally ex-planters with breadth of knowledge and experience in tea cultivation and manufacture. Most manufacturing advisors are retired estate superintendents whereas a limited number of manufacturing advisors are trained senior factory officers.

Advisory services provided by manufacturing advisors span across a large scope from land preparation, tea cultivation to marketing a better produce. They provide technical and strategic support to tea manufacturers in optimizing plucker productivity and land productivity, altering factory tea manufacture processes in order to produce a better tea etc.

As shown in Figure 1, larger fraction of the producers (32%) who visits their tea brokers intend to obtain/observe tea samples of other producer who are generally competitors of the factory/estate concerned. Visiting tea broker also facilitates the producer to directly involve in tea valuation process with the respective tea seller to gain a better understanding on the market condition while actively taking part in the price determination of their produce.

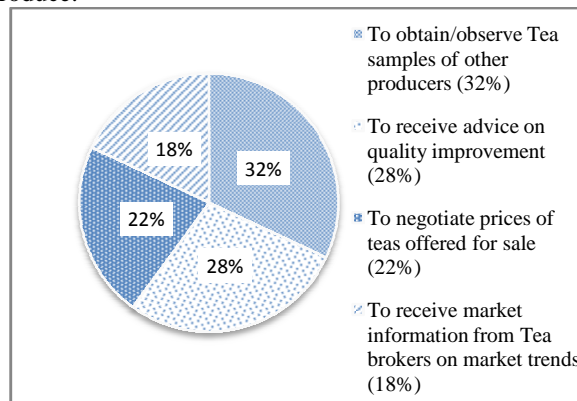


Fig. 1. Purpose of visiting tea broker

Table 1. Correlation table

Financial Performance Indicator	Level of Implementation of tea Brokers' Advisory Services	
	Pearson Correlation	P-Value
Net Sale Average (NSA)	0.551	0.000
Variation (NSA vs Regional Elevation Average)	0.590	0.000
Cost of Production (COP)	0.258	0.033
Gross Profit	0.459	0.000
Capital Acquisition	0.035	0.777

*P-Value at 5% significance level

According to Table I there is a strong positive correlation between factory Net Sale Average and Level of Implementation of tea brokers' advisory Services. Advisory Services offered by tea brokers are largely focused on increasing average price of teas produced by a tea Manufacturer. Improving overall tea quality and altering tea grade mixes from time to time in order to meet changing market requirements help tea Manufacturer to gain an advantage on factory Net Sale Average.

Variation between net sale average and regional elevation average gives clear insights into realizing current status of a tea factory in terms of tea price when compared to other tea factories in a region. It also serves as a strong financial performance indicator of a given tea factory. There is a strong positive correlation variation (net sale average vs regional elevation average) and Level of Implementation. Thus, it can be summarized that tea producers who implement tea brokers' recommendations have a higher chance of gaining an advantage in net sale average over respective elevation average.

Correlation between cost of production of a tea factory and level of implementation is weakly positive, which implies that there is no significant effect of tea Brokers' Advisory Services on reducing cost of production in a tea factory. In fact, both tea sellers and manufacturing advisors recommend optimizing production of a tea factory to produce best quality teas at highest possible quantities. This may cause direct and indirect costs added due to increased variable costs including labor costs, electricity bills and capital costs including acquisition of new machinery and attending prompt repair of old machinery.

Pearson correlation value for dependent variable gross profit is 0.459 with a P-Value of 0.000 at a significance level of 0.05. This implies that the relationship between the two variables considered is weakly positive.

Existence of a correlation between capital acquisition of a tea factory and tea brokers' advisory service is unclear that there is not enough evidence to reject null hypothesis at P-Value 0.777.

Table 2. Constraints Encountered when Implementing Recommendations

Response	Count
Poor leaf standards	34
Poor education level of laborers	27
Labor shortage	21
Increased cost of production	16
Unavailability of proper machinery	16
Unavailability of finance	12

Table II deliberates that the most common constrain encountered by majority of tea producers when implementing tea brokers recommendations is unavailability of good quality green leaf.

Factories produce tea from both estate leaf and bought leaf of which the leaf standard is of high importance. Irrespective of factory facilities and optimized production, improving quality of final produce is difficult unless a good leaf is supplied.

IV. CONCLUSION

Study on Impact of tea Brokers' Advisory Services on Financial Performance of tea Manufacturers concludes that there is a positive correlation between implementation level of advisory services and financial performance of a tea factory. However, it was significant that there is no apparent effect of advisory services on curtailing costs of tea estates/factories. Major constraint faced by tea manufacturers in adopting tea brokers' recommendations is unavailability of good quality green leaf.

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