

Factors Affecting on the Average Price Variation of Black Tea in Uva Region

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Introduction

Tea manufacturers produce different grades which fetch different prices at the auction. The average price received by the factory depends on the percentage of the different grades produced by the factory. A variation of the average prices of teas in Uva region has been occurring over past years and the price of the same grade also varies with time due to both controllable and non-controllable factors. It is important to analyze the fluctuation of the average prices that occurs due to the grades mix within the year. Production of the different factories varies in terms of total tea quantity, types of tea grades, percentage of tea produced from each grade. The average price of the same factory fluctuates with the time and the production in same factory also vary referring to the above factors with the time. Therefore this research was conducted to analyze the impact of the grades mix on average price of the graded tea and to make recommendations.

Methodology

The study was conducted separately for Uva High elevation and Uva Medium elevation. Secondary data were collected with the aid of structured questionnaire from twenty factories for each two elevations which were selected using random sampling technique. The relationship of average price with six independent variables such as total quantity, main grade percentage, number of main grades, number of off grades, season and elevation average was analyzed. The data obtained were analyzed using descriptive statistics, correlations, simple linear regression, and multiple linear regressions using the following empirical model in the study.

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Variables have been defined in Table 1.

Table 1. Description of variables.

Notation	Description	Remarks
AP	Average Price	Sri Lankan Rupee (Rs.)
TQ	Total Quantity	Kilograms (kg.)
MG	Main Grades Percentage	0 to 100%
NM	Number of Main Grades	1 to 17
NO	Number of off grades	1 to 6
SE	Season	Quality Season=1 Non Quality Season=0
EA	Elevation Average	Sri Lankan Rupee (Rs.)
B ₁ -β ₆	Coefficient	

Source: Field survey, 2013

Results and Discussion

Table 2. Descriptive statistics of variables.

Var.	Uva High				Uva medium			
	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max
AP	322.87	65.96	110.00	718.65	335.03	51.44	36.26	672.99
TQ	43935	26024	47	129437	45909	28167	0	154942
MG	67.608	24.51	0.0	100.0	68.31	20.07	0	100
NM	7.479	4.53	0.0	16	10.562	3.726	0	16
NOF	3.1373	1.60	0.0	6.0	3.5603	1.1313	0	6
SE	0.2507	0.43	0.0	1.0	0.2583	0.4382	0	1
EA	325.62	37.96	274.96	405.42	338.9	28.08	293.2	395.59

Source: Field survey, 2013 [Note: Var.: Variable, S.D.: Standard Deviation, Min: Minimum Value, Max: Maximum Value]

According to the results shown in table 02, the study the relationships of average price with the variables in two elevations of Uva region are as follows.

Uva High elevation, ($R^2=89.9\%$)

$$AP = -12.8^{**} - 0.000068 TQ + 1.41 MG^{**} + 1.33 NM^{**} - 2.98 NOF^{**} + 5.19 SE^{***} + 0.745 EA^{**}$$

Uva medium elevation, ($R^2=84.1\%$)

$$AP = -11.7^{***} + 0.000326 TQ^{**} + 0.908 MG^{**} + 2.94 NM^{**} - 3.31 NOF^{**} - 4.89 SE^{***} + 0.744 EA^{**}$$

Note: **: Significant at 5%, ***: Significant at 10%, R : Coefficient of Determination

The variation of average price is explained 84% by the six independent variables in Uva high elevation and 89.9% in Uva medium elevation. Total quantity and quality season are not significantly affecting on the average price of tea from Uva high elevation. Main grade percentage, number of main grades, number of off grades and elevation average significantly affect on average price of tea from Uva high elevation . Only the quality season is not significant on average price of the tea from Uva medium elevation. Total quantity, main grades percentage, number of main grades, number of off grades and elevation average significantly affect on the average price. Total quantity and number of off grades negatively affect on the average price of the Uva high tea and main grades percentage, number of main grades, quality season and elevation average positively influence on the average price of Uva high tea. In Uva medium elevation total quantity, main grades percentage, number of main grades and elevation average positively affect on the average price while number of off grades and quality season affect negatively.

Conclusions

Main grade percentage, number of main grades, number of off grades, quality season and elevation average were significant determinants of average black tea price of both Uva high and medium elevations. Total quantity significantly affect only for average price of Uva medium elevation.

References

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