Impact of Off-Farm Income on Tea Production of Tea Small Holders in Galle District

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Introduction

The total Sri Lankan tea extent is approximately 221,969 ha out of that 60% of the land extent belongs to the small holders. There are about 400,000 tea small holders in Sri Lanka.Small holding sector plays a vital role by producing more than 70% of the annual tea production in Sri Lanka (Source: TSHDA, 2011). There is a notion in the minds of small holders that cultivation of tea alone is not enough for their survival. So, there is a great potential for them to seek another income generation source.Off-farm activities have become an important component of livelihood strategies among tea small holders in Sri Lanka. Off farm income means the total income emerges from other sources except in primary farm production of crop, livestock, poultry and fisheries of a householder. Off-farm work has become a significant source of income for farm families (Mishra *et al.*, 2002).

Most of the small holders have given more emphasis and investments on other sources of income. They believe that they could get a higher Return on investment through investing on other sources of income than that of growing tea. Due to these reason the small holders are shifting away from the Tea cultivation and they strive less and invest less money on tea cultivation. The research was conducted in order to identify the impact of off - farm income on tea production and to identify most significant economic factors which affecting on tea production of tea small holders in Galle district.

Methodology

This study was based on two major DS divisions in Galle district which were Neluwa and Thawalama. Two DS divisions were selected by using cluster sampling method. 220 tea small holders were selected from those DS divisions by using simple random sampling method. Field survey method was used to collect the required information for the study. Researcher used a semi structured questionnaire to gather the required primary data. Secondary information for the research is gathered from the Tea Small Holdings Authority. Before gathering the information questionnaire was pretested and adjustments were made. Data were analyzed descriptively and statistically by using STATA statistical package. Empirical model was developed to determine the impact of off-farm income on tea production and other explanatory variables.

$$TTP = \beta_0 + \beta_1 AGE + \beta_2 EDU1 + \beta_3 EDU2 + \beta_4 TLE + \beta_5 FEXP + \beta_6 GEN + \beta_7 FC + \beta_8 CC + \beta_9 OFI + \beta_{10} MD + \beta_{11} NOFM + \beta_{12} NOWFM + \varepsilon_i$$

A description of variables are given in Table 1.

Table 1: Description of variables

Notation	Variable Description
TTP	Total tea production (kg)
AGE	Age of household head (years)
EDU1	Primary Education level of household head (Scores)
EDU2	Secondary Education level of household head (Scores)
TLE	Tea land extent (ha)
FEXP	Farming experience of household head (years)
GEN	Gender of household head (male=1,female=0)
FC	Fertilizer cost per year (Rupees)
CC	Chemical cost per year (Rupees)
OFI	Off-farm income of household head (Rupees)
MD	Man days per year
NOFM	Number of family members
NOWFM	Number of working family members

Results and Discussion

The dependence on income were categorized into two as diverse dependent and non-diverse dependent. Diverse dependents considered as those who depend on other income sources as well, while non-diverse is considered as those who just depend on tea related income. According to the Figure 1, majority of off-farm source was private income sources. It was 38% of the total sample.

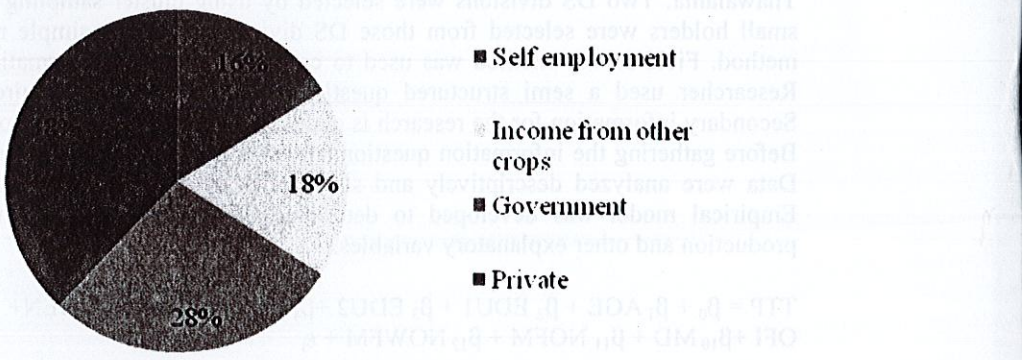

Figure 1: Categorization of off-farm income of Small Holders

The results have shown that tea production was not significantly determined by the off-farm income of tea small holders. But several other factors such as total tea land extent,

man days per year, fertilizer cost, chemical cost and number of family members were directly determined the tea production of tea small holders at 5% probability level.

TTP = - 2092 + 6146** TLE + 9.49** MD + 0.0740** FC + 0.343** CC + 358** NO FM

Significant variables were highlighted from *(star) marks.

Table 2: Results of Regression Analysis

Variable	Coefficient	T value	P value
TLE	6223.911***	6.54	0.000
MD	9.5853***	10.38	0.000
FC	0.0722***	4.68	0.000
CC	0.3261***	3.89	0.000
FEXP	-42.3788	-0.93	0.352
AGE	-0.8835	-0.03	0.980
EDU1	-1052.657	-0.78	0.434
EDU2	-792.6965	-0.57	0.569
G	-940.4357	-1.46	0.145
TOFI	0.0007	1.46	0.145
NO FM	381.2368**	2.25	0.026
NOWFM	-380.7932	-1.63	0.104

The overall model is significant due to the probability valueis less than at the probability levels of 5%. Always this model explains up to 88.2% of variation of tea production of small holders by these independent variables named total tea land extent, man days per year, fertilizer cost, chemical cost and number of family members.

Conclusion

The study revealed that there is no any significant impact of off-farm income on tea production. But other factors such as Total Tea land Extent, Fertilizer cost, Chemical cost, Man days per Year and Number of Family members have a significant impact on the total tea production of tea small holders in Galle district.

References

Mishra A. K., El-Osta, H. S. Morehart, M. J., Johnson, J. D., and Hopkins J. W. 2002. Income, Wealth, and the Economic Well-Being of Farm House-holds. Agricultural Economic Report 812, Economic Research Service, U.S. Department of Agriculture, Washington, DC.

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