DETERMINANTS OF HOUSEHOLD FOOD EXPENDITURE AMONG RURAL HOUSEHOLDS OF AMPARA DISTRICT

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ABSTRACT : This paper examines multiple aspects of share of expenditure on food and the factors determining the household food expenditure in rural households of Ampara district. The study was done in three Divisional Secretariat divisions in Ampara district. Results revealed that average monthly income per household was Rs. 14,735.93 which was lower than the mean household income in 2009/ 2010 for Ampara district. The share on food expenditure was high in cereals followed by fish. 59% of households had poor access to food leading to little margin to cope with shocks such as increased market prices or an illness that may require substantial medical care. And only 5% were in good condition. The coefficients of total household income and the size of the household were significant ($p< 0.01$) and exert a positive impact on food expenditure whereas age of the head of the household exerts a negative and significant impact ($p< 0.1$). Policy measures for improving the access to food and finally food security of farm households in Ampara district should be linked to their ability to expend their income on enough food for healthy lives.

Key words: Expenditure, Food, Household, Poor

INTRODUCTION

The nature and patterns of food expenditure continue to reflect the socio-economic and demographic characteristics of households under consideration. A household's relative expenditure on food is a reliable indicator of vulnerability. It describes household's capacity to cope with price increases, as well as their ability to remain productive by investing in health services, education, tools and other productive assets for its members. Households spending in excess of 65% of their total expenditure on food are clearly vulnerable in this regard as such a high percentage suggests that the household is forced to choose between meeting their food and non-food needs or reduce consumption of one or both below their needs.

From an empirical perspective, several studies have been undertaken to provide an understanding of the factors that affect household food expenditure. Gheblawi and Sherif (2007) examined the factors affecting expenditure on rice, fish, and meat in the UAE. Their results indicated that income and household size are important factors affecting the amount of money spent on the three examined food groups, and that the expenditure on the three examined food items was not highly responsive to changes in households' incomes. Several studies (Bansback, 1995, Steward *et al.*, 2004) point to the importance of socio-economic factors in determining consumers' purchasing decisions. A study by Fanning *et al.* (2005) on fast food consumption in the USA found that several socio-economic and demographic variables significantly influence the probability of fast food being part of household expenditure. Some of the more significant variables identified were age, income, education level, hours spent at work and the number of household members.

With the pressing need to increase food security, understanding the determinants of demand for food has become a vital task. Therefore, this study aimed at examining the food expenditure patterns amongst rural households and to identify and quantify the relationship between household food expenditure and the socio-economic and demographic characteristics of the household.

RESEARCH METHOD

The questionnaire was designed to gather information on the respondents' demographics, income and expenditure patterns and general views about their socio-economic status. The respondents' total monthly household food expenditure was of key interest in this study. Three Divisional Secretariat (D.S.) divisions were selected viz., Nawithanweli, Alayadivembu and Sammanthurai D. S. divisions. In these three D. S. divisions, five Grama Niladhari divisions were selected and from each D. S. division fifty samples were collected and altogether 150 samples were collected.

A multiple regression model was used to determine the socio-economic factors affecting household food expenditure. The selection of variables likely to influence household food expenditure relies on previous studies by Stewart *et a*l. (2004) and McCracken and Brandt (1987). The regression model was estimated as follows:

$$Y_t = \beta X_t + \varepsilon_t$$

Where Y_t is unobserved, X_t is vector of explanatory variables, and β is the vector of unknown parameters and ε_t is the error term.

RESULTS AND DISCUSSION

Demographic characteristics of households

The sample data were based on responses from the head of the household. Average household size of the study area was 4.4 and the mean age of head of the household was 48.5 years (Table 1). 49.1% of the rural households were Hindu, 30.6% were Muslims and the rest were from other religion. Average monthly income per household was Rs. 14,735.93. Average monthly income in the study area was lower than the mean household income in 2009/ 2010 for Ampara district. (Household Income and Expenditure survey, 2009/ 2010). Average expenditure on food items was Rs. 7983.33.

Descriptive statistics of demographic characteristics of the households

Variable	Sample size	Mean(Std. deviation)
Household (HH) size	150	4.4 (1.3)
Age_Head of HH	150	48.5 (10.1)
Average Income per HH	150	14735.93 (7211.12)
Expenditure on food per HH	150	7938.33(2788.17)

Table 1

30% of the head of the households had the education level in between year 5 to Ordinary level. 64.3 % had the upto year 5. And the rest had the education level upto A/ L.

Frequency distribution of the education level of the head of the household

Years of Schooling of Head of HH	Percent
1 to 5	64.3
5 to O/L	30
A/ L	5.7
Total	100

Table 2

Expenditure on food items

Households in the surveyed area spent Rs. 2253.22 (28%) on cereals followed by fish (Rs. 1902.00) and vegetables (Rs. 1714.23) monthly. Only 5% was spent on fruits (Figure 1).

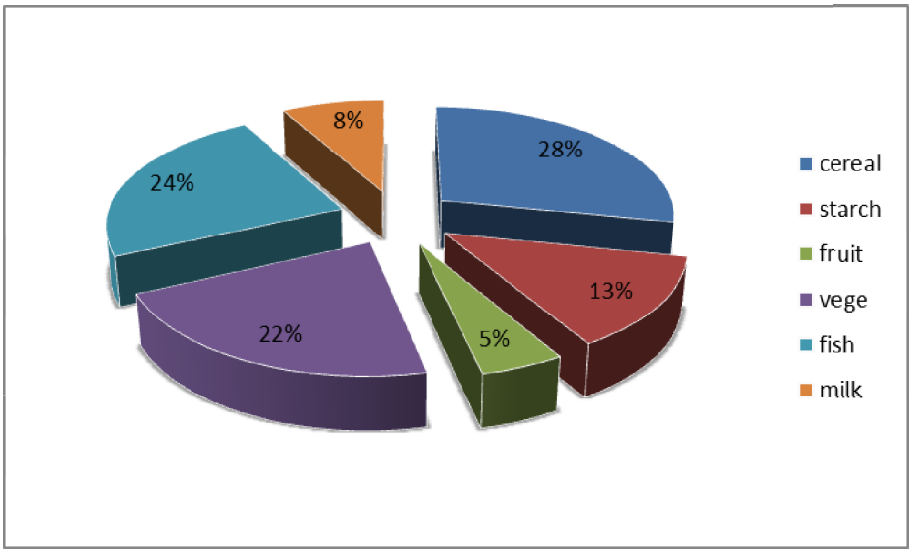

Fig. 1: Share of expenditure on different food items per month

Share of Food Expenditure

The share of food expenditure of total expenditure is a proxy indicator of household food vulnerability. The higher the share of food expenditure, the greater the likelihood that a household has poor food access.

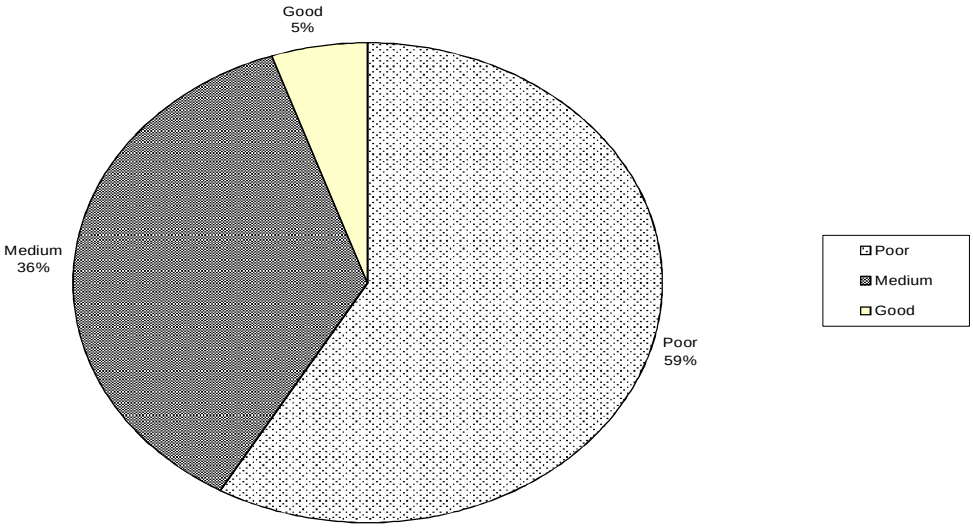

Fig. 2: Share of Expenditure spent on food

Overall, based on the share of expenditures on food, 59% of households had a poor access to food (i.e. food expenditure is more than 65% of total household expenditure). If a household is spending more than 65 percent of its income on food, then there is little margin to cope with shocks such as increased market prices or an illness that may require substantial medical care. In the comprehensive food security and vulnerability analysis of WFP (2012, p.17) found that "poorer households have lower levels of education, spend a larger share of their limited means on purchasing food, have smaller harvests, and are more often buying their staple foods when the market prices are highest when compared with wealthier households". Only 5% of the households were in good condition.

Determinants of food expenditure

The results of the regression model on the factors that affect household food expenditure are shown in Table 3. The coefficient of determinant (R^2) is 0.332, suggesting that 33.2% variation in farm household food expenditure is accounted for by variations in the selected explanatory variables. The most important variables explaining variations in food expenditure were total household income, the age of the head of the household and the size of the household. The coefficient of total income with regard to food expenditure is significant and positive at 1% level of confidence, indicating that the higher the income the higher is the propensity of expenditure shares on food to be increased. This was consistent with the results of study by Tangka *et al.*(2002) where the coefficient of total household income was positive and significant so that increasing household income increased expenditures on food consumption. And as the number of household members increases the share of household expenditure on food also increases. This was interpreted by the positive and significant sign (1% level) of the household residents. These results are consistent with those of Davis *et al.* (1983) who concluded that household income and household size exert a significant positive impact on household food expenditure.

As the age of household head increases the share of household expenditure on food reduces at 10% level. This is as a result of the need to spend on other social services thereby reducing the share of household expenditure on food. Families with old family members may need less food because the caloric needs tend to decrease with age, so their presence in a household leads to declining food expenditure. Similar result was reported by Osinubu, (2003).

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Meng, Florkowski and Kolavalii (2012) found that the socio-demographic characteristics of consumers, such as age, gender, married status, education and family structure, were significantly correlated with food expenditure.

Parameter estimates of the relationship between Total expenditure on food against different variables

Dependent variable: Total expenditure on food	
Explanatory variables	**Co-efficient (Std. dev)**
Age HH head	-35.1* (18.6)
Education level of HH Head	-159.8 (97.1)
Ethnicity	-468.2 (789.2)
Gender of HH head	2457.9 (1662.6)
Presence of employment	-186.8 (542.87)
HH size	569.2** (152.6)
HH monthly income	0.17** (0.02)
Constant	2638.5 (4003.6)
R^2 0.36	Adjusted R^2 0.33
***Significance at 1% level	**Significance at 5%level
*Significance at 10%level	

Table 3

CONCLUSION

This study set out to investigate the share of expenditure on different food items and to identify and quantify the relationship between household food expenditure and the socio-economic and demographic characteristics of rural households in Ampara district. Results revealed that 59% of households had a poor access to food leading to little margin to cope with shocks such as increased market prices or an illness that may require substantial medical care. 36% had medium access to food and only 5% were in good condition. Households in the surveyed area spent higher proportion (28%) on cereals followed by fish (24%) and vegetables (22%) monthly. Findings of the study revealed that the significance of household income and size of the household in determining food expenditure positively and age of the head of household negatively. Therefore policy measure for improving the access to food and finally food security of farm households in Ampara district should be linked to their ability to expend their income on enough food for healthy lives.

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