International Journal of Intelligent Computing and Technology
ISSN: 2457-0249 (Online)
IJICT

Website: https://www.ijict.com **June (2020) - Vol.4, Iss.1 Pages:40-56**

Determinants of Household Consumption Expenditure in Tepi Town, SNNPR, Ethiopia

[1]Wegayehu Enbeyle, [2]Yibeltal Meslie & [3]Digvijay Pandey

[1,2]Department of Statistics, Mizan-Tepi University, Ethiopia
[3]Department of Technical Education, IET, Lucknow-226021, India

Article History- Received: May 2020; Published: June 2020

Abstract

Food is a basic human need. The right to food is fundamental and without it many other human rights cannot be enjoyed. Consumption is spending carried out by households and services in order to meet the needs of those who make these purchases**.** The proportion of household food consumption expenditure is often used as a benchmark determinant of the welfare level. The main core objective for this study was to determine the factors those affect household food expenditure in case of Tepi Town. In order achieve the goal the specific objectives of the study are:-1) To identify socio-economic and demographic related factors on household's food expenditure and 2) To provide recommendations about food expenditure based on the findings of the study. A total of 130 households were included in the present study using simple random sampling technique from the Andenet kebele. Cross-sectional design was appropriate for this study. Primary source of data was employed collected from households.

Descriptive and inferential statistics were applied. For statistical analysis SPSS 20 was used at 5% level of significance. The descriptive statistics revealed that the households spend on food per monthly with minimum of 1000 and maximum of 7000 birr while, the mean of household for food expenditure was 2985.47 birr. Multiple regression models showed that family size, household income, additional income of house hold and marital status [Single] were found to be a significant effect on household food expenditure per monthly at 5% level of significance at study area. However, age, occupation, religion, mother education level, father education level, is there high price of food, reason for high price change and decision making were not found to be significant effect to household food expenditure per monthly at study area. All the assumption of regression analysis was satisfied. Normality, Constant variance, absence of Multicolinearity, linearity and absence of autocorrelation were satisfied due to formal tests and diagnostic plots. Finally, study recommended that advisable for being educator and also households to improve their income level per month by involving in various different activities that help them generate additional income.

Keywords: Food, Expenditure, Tepi Town, Multiple Regression Model

1. INTRODUCTION

Food is a basic human need. The right to food is fundamental and without it many other human rights cannot be enjoyed. However, the accessibility and availability of food in the desired quantity and quality throughout a given year remains a dream for many people around the world [1]. Food is important of human need and consumed in large number in developing and developed country. The proportion of household food consumption expenditure is often used as a benchmark determinant of the welfare level [2]. Consumption is the most important component of national income accounting and the aggregate demand. It is the ultimate economic activity on which the welfare of the economy depends and constitutes a major portion of disposable income of the households on micro economic level [3].

Consumption is spending carried out by households and services in order to meet the needs of those who make these purchases [4]. Food security is a broad concept, encompassing issues related to the nature, quality, and security of the food supply as well as issues of food access. The world has been facing a paradox of widespread food insecurity and malnutrition amid net food surpluses. Increased food supplies do not automatically enhance access to food by the poorer groups of society [5]. The age of household head, total household income, and household size, tenure of residence, household head's marital status and occupation are the factors affecting the expenditure. Gender of household head, period of education of household head, type of residence, household debt and household head's hours of participation in the workforce have no influence on the expenditure [6].

Reported food expenditure for each household based on 2005/2006 Income and Expenditure Survey data gets compared to two dietary energy cost baskets. The food expenditure shares of the poorest households vary between 38% and 71% according to different surveys. At food expenditure levels reported in the IES, one in five households meets their average dietary energy cost. Deep levels of food insecurity exist in rural areas with 85% of rural households unable to afford even the 'below average dietary energy costs [7]. Effect of the number of family dependents on the expenditure of poor households. The variable number of family dependents shows that the value of Probability less than 0.05), means that the variable number of family dependents has a positive and significant effect on the expenditure of poor households [4]. Demographic factors such as low family planning and low land holding size compared to family size, due to weakness of rural administration, low rural infrastructure [5]. It has been asserted that food security regarding small holder rural farming households is undermined by

factors such as low income generation, small farm size, large household size, low utilization of improved farming inputs, etc. These findings have policy implications for livelihoods, household welfare and overall development. For livelihoods, there is the need for economic empowerment of poor rural farming households to enable them caters for their food needs [8]. Therefore, an increase in cost of production may lead to less farm income and may indirectly affect farm household food security status. The third indicator, the transportation cost is also negatively associated with food security status [9].

According to economic theory and observed behavior age has negative effect on consumption. The study also demonstrates that as the age increases consumption decrease. According to Life cycle hypothesis, when age increase saving of individual increases more rapidly this will leads to reduction in consumption. There is also positive relationship exists between gender, education and family structure with household consumption. Education is an important predictor for household's behavior towards consumption. The study found that education has positive effect on consumption. Although educated households have higher consumption because they have to maintain a certain standard of living and usually spend more on children's education, health, clothing, food and necessary luxury goods [10]. Socio-economic factors such as low level of income (income constraint), low level of education, low level of access to new technology such as improved seeds, chemical fertilizer, herbicide, pesticide, high expenditure for social ceremonies and celebrations. Demographic factors such as low family planning and low land holding size compared to family size, due to weakness of rural administration, low rural infrastructure [11]. The study revealed that the educational attainment level of household's head positively contributed to enhancing the situation of food security, the female-headed households are more food insecure compared to male- headed households, although they play major role in household food security. Similarly, the households with bigger size of land holding, nearness to road heads and markets, and the members having off-farm and non-farm occupation contributed positively to food security whereas bigger household size contributed negatively to the food security [12].

Using a national household survey and a newly established food security scale, socio-demographic factors affecting the level of household food insecurity in Mexico were identified. Households more likely to be food in secure include those with younger, less-educated household heads, headed by single, widowed or divorced women, with disabled household members, with native language speakers, with children, as well as rural and lower-income households. The model was also estimated for the rural and lower-income subpopulation,

finding that low levels of education, native language speakers, and number of kids are factors associated with higher levels of food insecurity [13]. The number of family has a positive and very significant effect on the household expenditure with the estimator parameter value of 4.05. This means that the number of households determines more on the rise or fall in line with the household expenditure amounted to 4.05. This can be understood because more family members are increasing the household expenditure, especially for the daily needs of each individual in the family [14]. Education increases the ability of households to use their resources efficiently and the locative effect of education enhances households` ability to obtain analyses and interpret information. Education significantly affected access to enough food positively. The more the head of household is educated the more the household is likely to access enough food. Educated household heads were more likely to be absorbed in the labor market and would get remunerations that would improve their access to enough food [15].

According to the results of this study, we can expect that livestock development programs such as training of farmers in animal husbandry would improve livestock productivity and, thus, increase food security [16]. Marital status had a mean 0.44 which showed that fewer household heads were married. With a calculated mean of 0.5, the educational level of the sample was equal between having ‘below primary education’ and ‘above primary education’ [17]. Among the many factors that contribute to the attainment of food security or the occurrence of food insecurity, poverty and income are highly predictive factors, as they directly relate to the household’s ability to acquire nutritionally adequate food [18].

The findings clearly suggest that education, gender, age of household head and household size affect both mild-to-moderate food insecurity as well as the experience of severe household food insecurity in the study area. Additionally, household production of vegetables, low dependency ratio, steady income source such as those from formal employment as well as household receipts of social grants and remittances were associated with lower levels of mild-to-moderate food insecurity [19]. A multiple regression model was used to explain responses in monthly expenditures to socio-economic factors. Household income, household size, the number of people who are employed, employment status, and the educational attainment of the household head were found to exert a strong positive impact on household expenditure. The marital status of the household head was associated with a negative impact on household expenditure. The gender and age of the household head had no impact on the variations in household expenditure. The results of this study contribute to the understanding of township residents by analyzing the socio-economic factors associated with household expenditure [20].

The results indicate that indeed there are relationships that could be discerned between household food expenditure and gender, education, occupation, household income, number of people depending on household income, gender distribution by age groups and number of livestock sales per annum. However, household income has a relatively smaller effect in magnitude as compared to the rest of these factors. Furthermore, the results show that the relationships differ along the quintiles. In other words, some factors had a significant and higher effect in the lower quintile compared to the higher quintile [21].

This study attempt to explore the factors those affect food expenditure in case of Tepi town. The main objective of this study is to determine the factors those affect household food expenditure. In order achieve the goal the specific objectives of the study are 1) To identify socio-economic and demographic related factors on household's food expenditure in study area and 2) To provide recommendations about food expenditure based on the findings of the study.

2. DATA AND METHODS

This deals with detailed description about study area, source of data, study population, sampling technique, study variables, sample size determination and study design explanation about the theory behind the methods of and models for the analysis.

2.1 STUDY AREA

The study was conducted in Tepi Town, Sheka Zone, South Nation Nationalities Peoples of Region, and Southwestern Ethiopia. The capital of the Zone, Masha, is located 951 Km to North West of Awassa, the capital of SNNPR and 676 km to Southwest of Addis Ababa. Sheka is bordered on the south by Bench-Maji, on the west by the Gambela Region, on the north by the Oromiya Region, and on the east by Kaffa. Our target population for this study is households who live in Tepi Town in Andenet Kebele.

2.2 STUDY DESIGN

For this study, cross sectional data collection method was done, which is appropriate when one or more than one variable are collected for several sample units at the same points in time.

2.3 SAMPLING TECHNIQUE

Sampling techniques is a system of taking small ratio of observation from large population to get information of those large populations from the sampled observation by using some

statistical techniques. For this study, we use simple random sampling techniques by selecting appropriate sampling size from the population in Tepi town in case of Andenet Kebele.

2.4 SAMPLE SIZE DETERMINATION

Determining the sample size for a study is a crucial component of study design. The goal is to include sufficient numbers of subjects so that statistically significant results can be detected. In order to have an optimum sample size, there are a number of issues/points one has to take into account. Then, where the required sample size is a 95% confidence level for normal distribution which is 1.96 is a margin of error (5%). In order to get desired sample size we use the formula accordingly, the sample size determination formula adopted for this study was

$$\boldsymbol{n_o = \frac{(Z_{a/2})^2 S^2}{e^2} = \frac{(1.96)^2 * 0.084}{0.0025} = 130}$$

Where; $Z_{a/2}$ is level of significance, S^2 is estimated variances for 12 households by asking the response variable (what is your average food expenditure per monthly in Birr) by conduct pilot survey and e is margin of error.

2.5 METHOD OF DATA COLLECTION

Primary data collection was used to collect row data from respondent through observation, personal interview, questionnaires, etc. In this study, researcher collected the data from the households directly in a particular time (primary data).

2.6 STUDY VARIABLES

The dependent variable for this study was average households food expenditure per monthly in Birr. Here are some explanatory variables with their categories that affect household average monthly food expenditure. Therefore, the independent variables included in this study were list out below Table 1.

Table.1 Independent variables included in the Present Study

Variables	Category(coding)
Sex	[0=Male 1=Female]
Age	[Continuous]
Income per month	[Continuous]
Family size	[Continuous]
Occupation	[0=Merchant 1=Government, Employment, 2=Farmer, 3=Daily labor]
Religion	[0=Orthodox, 1=Muslim, 2=Protestant, 3=Other
Marital status	[0=Single 1=Married 2=Widowed 3=Divorced]
Mother education level	[0=Illiterate, 1=Elementary, 2=Secondary, 3=Degree & above, 4=Not applicable]
Father education level	[0=Illiterate, 1=Elementary, 2=Secondary, 3=Degree & above, 4=Not applicable]
Is there high price of food?	[0=Yes 1=No]
Have you additional income?	[0=Yes 1=No]
Reason for high price change	[0=Shortage supply, 1=Not enough product, 2=Higher consumer, 3=Government not give subsides, 4= Expensiveness raw materials, 5=Other]
Decision making	[0=Husband, 1=Wife, 2=Both, 3=Not applicable]

2.7 STATISTICAL DATA ANALYSIS

Descriptive Statistics

Descriptive statistics consists of the collection, organization, summarization, and presentation of data. In descriptive statistics the statistician tries to describe a situation. Once data is collected, the researcher must organize and summarize them. Finally, the researcher needs presenting the data in some meaningful form, such as charts, graphs, or tables.

Multiple Linear Regression Model

Multiple linear regression models are used to model the relationship between a single dependent variable (response variable) and more than one independent variable. Multiple linear regression is required so that the dependent variable to be continuous and the independent variable to be discrete, continuous and categorical. In the model of multiple linear regressions, response variable is a linear function of the k explanatory variables and of a statistical error term. The model also has an intercept. Designating the single response variable by Y, the K independent variable by $X1, X2, X3 \ldots Xk$ and the error term by ε, the population model of multiple linear regressions is given by the following expression:

The model is denoted by:

$$Y = \beta_0 + \beta_1 X_1 + \cdots \ldots + \beta_k X_k + \varepsilon \qquad (1)$$

Where;

- Y is response variable(average mark of students)
- β_0 is constant parameter
- $\beta_1, \ldots \ldots \beta_k$, are unknown parameters.$i = 1, 2 \ \ldots k$
- $X_1, X_2 \ldots \ldots X_k$, were explanatory variables
- ε is the error term

The model parameters were estimated by using least square estimation method in order estimate the unknown parameter for multiple linear regressions. The ordinary least square estimation can be work as after a certain procedures.

$$\hat{\beta} = (x'x)^{-1}x'y \qquad (2)$$

Where; y is vector of observation of academic achievement, y(nxp) is invertible matrix of coefficient, y is matrix of factors affecting the academic achievement, βs are vectors of the

coefficients of the regresses (independent) and β (px1) is vectors of regression that was estimated from the data.

Assumption Regression Model

- Multiple regression models should be linear and also parameter should enter the model in linear form (Linearity)
- Errors have normal distribution with mean vector zero(Normality)
- Variance of the errors at each fixed values of the independent variables is constant that is δ^2(Homoskedasticity)
- There is no correlation between successive error terms. That is corr $(\varepsilon i, \varepsilon j = 0)$ (non autocorrelation). Autocorrelation occurs when the residuals are not independent from each other.

There must not be significant relation between the independent variables in other words X is a n × k matrix of full rank (no Multicolinerity). It occurs when several independent variables correlate at high levels with one another.

Hypothesis Testing for ANOVA

Adequacy of the model in multiple linear regressions can be checked by testing the regression coefficient associated with the independent variable.

Step 1: Identify the null and alternative of hypothesis:

Ho: $\beta 1 = \beta 2 = \beta 3 = \cdots \beta k = 0$ (The model is not adequate to fit the data)

Ha: $\beta i \neq 0$.

For at least one $i = 1,2,3, \ldots k$ (The model is not adequate to fit the data)

Step 2: Fix the level of significance and the tabulated value: $\alpha = 0.05$(Most of time)

Step 3: Find the test statistic

$$\text{F cal} = \frac{\text{MSR}}{\text{MSE}} \qquad (3)$$

Where,

$$\text{MSR} = \frac{\text{SSR}}{\text{df}} = \frac{\text{SSR}}{(\text{k}+1)-1} \qquad (4)$$

$$\text{MSE} = \frac{\text{SSres}}{\text{df}} = \frac{\text{SSres}}{\text{n}-(\text{K}+1)} \qquad (5)$$

Step 4: Decision and rejection region: Decision rule reject Ho if, f cal $> f\ tab$

Step 5: Conclusion: Rejecting the null hypothesis implies that the adequacy of the model to fit the data very well.

Hypothesis Testing on the Individual Regression Coefficient

In case, if the test in analysis of variance is rejected, then another question arises is that which of the regression coefficients is/are responsible for the rejection of null hypothesis. The explanatory variables corresponding to such regression coefficients are important for the model.

Step1: State the null and alternative hypothesis

Ho: $\beta i = 0$ (the i^{th} predictor has not significant contribution to the model)

Ha : $\beta i \neq 0$(the i^{th} predictor has significant contribution to the model)

Step 2: Fix the level of significance: it is two tailed hypothesis it will be $t\,tab = t\frac{a}{2}^{(n-(k+1)}$

Step 3: Compute the test statistic: Which has been used to test the above hypothesis is $t\,cal = \frac{bi}{\hat{\delta}\sqrt{Cii}}$ and has a t distribution with $n-(k+1)$ degree of freedom) under the null hypothesis

Step 4: Find the rejection region and make your decision: Calculated value will be compared to the tabulated value and if the calculated value is greater than the t-tab or if it is less than negative of the tabulated value, null hypothesis will be rejected. Rejecting the null hypothesis implies that i^{th} independent variable has statistically significant contribution to the model.

Step 5: Make conclusion

2.8 Statistical Software's

For statistical analysis SPSS version 20 software was used at 5% level of significance.

3. RESULTS AND DISCUSSIONS

The objective of this study was to describe and make analysis about the effect of major socio-economic and demographic related characteristics on food expenditure. In this study, descriptive analysis and multiple regression analysis were employed to identify the risk factors. Data analysis was presented in this study based on a total of 130 households. The descriptive statistics revealed that the households spend on food with minimum of 1000 and maximum of 7000 birr while, the mean of household for food expenditure was 2985.47 birr.

Table 2. revealed that 0.64 shows the model is adequate (good fitted the data), implies that 64% of the variability in the average on food expenditure of households are explained by the

variability of the independent variables in the estimated regression and while, 36% explained by other non-explained factors out of our determined independent variable in the study.

The present or absent of auto correlation checked by Durbin Watson test (DW). From Table 2. Durbin Watson test is equal to 1.92 which approach to 2. Durbin Watson test revealed that absence of autocorrelation for the assumption of multiple linear regressions. Errors must be uncorrelated.

Table.2 Model Summary Statistics of the Study

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
	.86	.74	.64	783.37	1.92

Table.3 results shows that the Sig value (.000) reveled that combination of variables significantly affect and predicts the dependent variable (average households food expenditure). Based on the analysis of variance tables we have to test the overall test of the regression model. From the ANOVA tables Table.3 Sig-value (.000) < 0.05, therefore, we can conclude that at 5% level of significance at least one of the β_j has significance impact on the regression model. The overall model is statistically significance for the data.

Table. 3 Sig Value

Model		Sum of Squares	DF	Mean Square	F	Sig.
	Regression	1.337E8	13	1.028E7	15.915	.000
	Residual	6.721E7	104	646233.537		
	Total	2.009E8	117			

As we see the coefficient in Table 4. below, variables family size, household income, additional income of house hold and marital status [Single] were significantly contribute (p-value small compared to 0.05) to predict of the average monthly food expenditure per month. Other variables are not significant (P value very large >0.05). Removing other variables, and fitting the model with significant variables at 5 % level of significance, we obtained the result shown in Table 4. below.

The final model for the study given by:

Average food expenditure

$$= 474.99 + 257.33 \text{ Family size} + 0.25 \text{ income} + 204.5 \text{ additional income} + 7151.11 \text{ Single}$$

Table.4 Coefficient table selected predictors

Variable	Unstandardized Betas		t-test	Sig.	95% CI
	B	Std. Error			
(Constant)	474.99	633.97	0.75	0.456	[-784.69,1734.68]
Family size	257.33	94.467	2.72	0.008*	[69.62, 445.02]
Household income	0.25	0.04	7.19	0.000*	[0.184, 0.32]
Additional income of house hold	204.50	168.29	-1.22	0.038*	[129.89,538.88]
Marital status [Single]	715.11	232.09	3.08	0.003*	[253.96,1176.26]

***=Statistically significant at 5%**

Family size (households size) an important predictor variable for average monthly food expenditure. (see Table 4) β=257.325 showed that as the family size increased by 1 unit (one household member) the average monthly food expenditure increased by 257.325 birr by controlling other variable remain constant.

The number of family dependents has a positive effect on the food expenditure per monthly. The amount of family expenditure is also quite influencing household consumption where the more the number of house members is borne in one household, and then the burden of poor households will be heavier because there are more and less productive members. This can be understood because more family members are increasing the household expenditure, especially for the daily needs of each individual in the family.

Among the explanatory variable that were included in the model, marital status were found to be statistically significant at various probability levels (p-value<0.05) (see Table 4) β=715.107 tells us that the mean difference of average monthly food expenditure of single marital status households and the reference group. There is difference in food expenditure per month individual who had single marital status being significant affected. Hence, the number of

people who actually depend on the household expenditure as well as their gender distribution by age groups and marital status must be taken into consideration.

Income per month had significant effect on average monthly food expenditure of household (see Table 4) β=0.254 showed that as the income of households increased by one birr average monthly food expenditure increased by 0.254 birr by keeping other variable making constant. Income per month has a positive effect on the expenditure of households in study area. This shows greater income for households, so the ability to consume is greater so that the opportunity to prosper the household is also greater.

Finally, for this study and area additional income also had significantly effect on food expenditure among households (see Table 4) β=204.49 indicated that the average monthly food expenditure of households who get additional income is more than 204.50 birr compared with household not get additional income keeping other predictors were constant. After fitted the model one important point to keep in mind is that these assumptions are for the population and we work only with a sample. So the main issue is to take a decision about the population on the basis of a sample of data. Several diagnostic methods to check the violation of regression assumption are based on the study of model residuals with the help of various types of graphics.

Normality assumption usually checked by histogram. Fig 1 displayed that the residual of the average mark students was normally distribution with mean 0 and variance 1 (dependent variable normally and independently distribution with mean$(8.03 * 10^{-17} \approx 0)$ and variance $(0.943 \approx 1)$ and it indicate that residual approximately normally distributed with $\mu \sim (0, 1)$. As result of the normality was satisfied. Data satisfied normality assumption (see Fig 1).

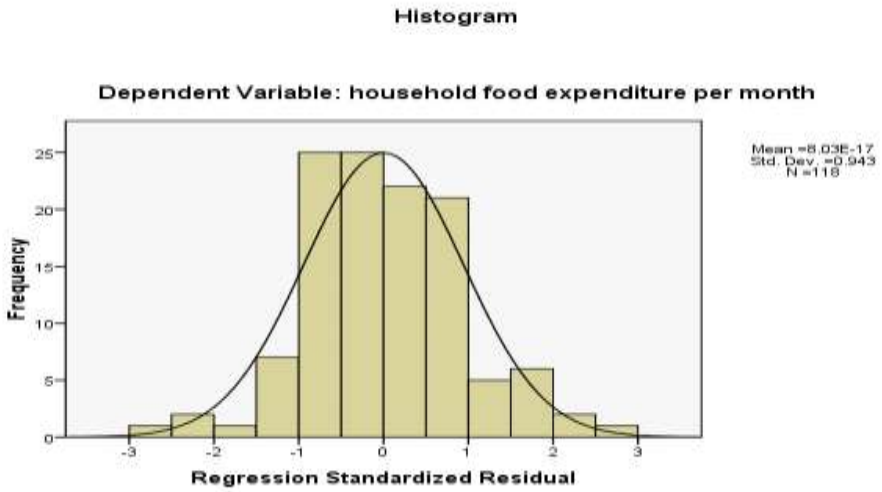

Fig.1 Histogram Plot in Bar Chart Depicting the Normality Assumption

Good way of detection of when constant variance assumption satisfied or not is that residuals vs. fitted values. From Fig 2 plots were random scatter of points (it is not in systematic pattern). This shows that the standardized residual are uncorrelated with the fitted value. Therefore, the plot is random or non-systematic pattern there is no problem constant variance in the model (see Fig.2).

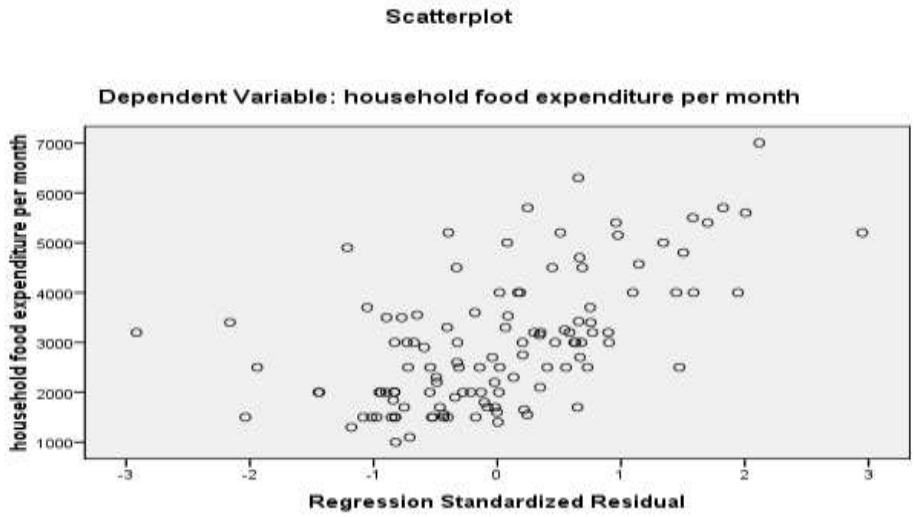

Fig. 2 Scatter Plot: X-Axis Represents the Regression Standardized Residual and Y-Axis Represents the Average Mark of Respondent.

Table 5 summarized that there is absence of Multicolinearity. VIF for each continuous predictor variables were less than 10(see Table 5.). Model is good fitted.

Table.5 Collinearity Statistics Family size, Income per Month &Additional Income

Variables	**Collinearity Statistics**	
	Tolerance	**VIF**
Family size	.330	3.030
Income per month	.686	1.458
Additional income	.858	1.166

CONCLUSION

The main core objective for this study was to determine the factors those affect household food expenditure in case of Tepi Town. A total of 130 households were included in the present study using simple random sampling technique from the Andenet Kebele. Descriptive and inferential statistics were applied. Descriptive statistics revealed that the households spend on food per monthly with minimum of 1000 and maximum of 7000 birr while, the mean of household for food expenditure was 2985.47 birr. Multiple regression models showed that family size, household income, additional income of house hold and marital status [Single] were found to be a significant effect on household food expenditure per monthly at 5% level of significance at study area (see Table 4.). However, age, occupation, religion, mother education level, father education level, is there high price of food, reason for high price change and decision making were not found to be significant effect to household food expenditure per monthly at study area (see Table 4.). The overall model is statistically significance for the data (see Table 3.). All the assumption of regression analysis was satisfied. Normality, Constant variance, absence of Multicolinearity, linearity and absence of autocorrelation were satisfied due to formal tests and diagnostic plots (see Fig 1. Fig 2. Table 5.). Study recommend that government of Ethiopia especially Tepi Town should design and implement policies that raise disposable income of households so that households work to earn more money and make their living standard better. It is advisable for households to improve their income level per month by involving in various different activities that help them generate additional income.

REFERENCES

1. B. N. Wambua, K. J. Omoke, and T. M. Mutua (2014), “Effects of Socio-Economic Factors on Food Security Situation in Kenyan Dry lands Ecosystem,” vol. 2, no. 1, pp. 52–59
2. M. R. Pahlevi, D. Y. Andita, E. Gumilar, F. Nursafitri, and S. S. Sofiani (2016), “Examining Factors Affecting the Food Expenditure in Indonesia,” pp. 493–498
3. D. Town and A. Region, “Determinants of Household Consumption Expenditure in,” pp. 124–144.
4. M. S. Mubarak, A. Khalifah, A. Mandela, and A. Yunus (2008), “Analysis of Factors Affecting Expenditure of Poor Households in Luwu District , Indonesia,” vol. 10, no. 5, pp. 54–58

5. U. Iram and M. S. Butt (2004), "Determinants of household food security An empirical analysis for Pakistan," vol. 31, no. 8, pp. 753–766
6. P. Wigraiphat, V. Limsombunchai, and T. Kittiveja (2012), "Factors Affecting Households Expenditure on Food Away from Home (in Thai)*," vol. 19, no. 2, pp. 37–49
7. P. T. Jacobs (2009), "The status of household food security targets in South Africa," vol. 48, no. 4, pp. 410–433
8. J. Agyei (2016), "Factors Affecting Food Security of Rural Farming Households Left Behind in Northern Ghana," vol. 5, no. 2, pp. 6–11, 2016.
9. U. I. Ahmed, L. Ying, M. K. Bashir, M. Abid, and F. Zulfiqar (2017), "Status and determinants of small farming households ' food security and role of market access in enhancing food security in rural Pakistan," pp. 1–15
10. M. Ajmair (2012), "Houehold Consumption in Pakistan (A Case Study of District Bhimber , AJK)," vol. 75, no. 3, pp. 448–457
11. T. Dula and W. Berhanu, "Determinants of Rural Household Food Security and Coping Up Mechanisms in the Case of Woliso Woreda Western Ethiopia," pp. 1–10.
12. G. R. Joshi and N. B. Joshi (2016), "DETERMINANTS OF HOUSEHOLD FOOD SECURITY IN THE EASTERN REGION OF NEPAL," vol. 14, no. 2, pp. 174–188
13. D. Magaña-lemus, A. Ishdorj, C. P. R. Iii, and J. Lara-álvarez (2016), "Determinants of household food insecurity in Mexico," Agric. Food Econ.
14. L. Marnisah, A. Karim, A. Sanmorino, and T. J. Jenahar, "Analysis of Factors Affecting the Household Expenditure of Rubber Farmers in Indonesia," no. 4, pp. 304–306.
15. L. Musemwa, L. Zhou, S. Ndhleve, and F. Aghdasi, "Factors affecting household access to enough food in the Eastern Cape Province of South Africa," vol. 5, no. March, pp. 84–91, 2013.
16. W. Nkomoki, M. Bavorov, and J. Banout (1829), "Factors Associated with Household Food Security in Zambia," no. iii, pp. 1–18
17. V. Ramdhanie, C. Pemberton, and I. Granderson(1983), "Socio-economic factors affecting household food expenditure in North Trinidad,"
18. H. Saediman and U. Haluoleo, "Determinants of Household Food Expenditure in a Cassava Growing Village in Southeast Sulawesi."
19. P. Sakyi (2012), "Faculty of Bioscience Engineering Determinants of Food Accessibility of Rural Households in the Limpopo Province, South Africa,"
20. T. J. Sekhampu, S. Africa, F. Niyimbanira, and S. Africa (2013), "Analysis Of The Factors Influencing Household Expenditure In A South African Township," vol. 12, No. 3

21. K. Sotsha, K. Rambau, T. Khoza, V. Mmbengwa, and S. Ngqangweni, "Socio-economic determinants of rural household food expenditure : A quantile regression analysis."

How to cite this article:
Wegayehu Enbeyle, Yibeltal Meslie & Digvijay Pandey, "Determinants of Household Consumption Expenditure in Tepi Town, SNNPR, Ethiopia", International Journal of Intelligent Computing and Technology (IJICT), Vol.4, Iss.1, pp.40-56, 2020