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FOOD CONSUMPTION AND EXPENDITURE PATTERN OF PUBLIC SERVANTS IN DELTA STATE: A CASE STUDY OF DELTA STATE POLYTECNIC OZORO, NIGERIA

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ABSTRACT: This study was conducted in Delta State to examine the consumption and expenditure patterns of public servants in Delta State. One hundred and twenty (120) respondents were randomly selected from Delta State Polytechnic Ozoro, sixty (60) each for junior and senior staff respectively. Structured questionnaires were administered to a cross section of the respondents. The data obtained were analyzed using the ordinary least squares method of multiple regression analysis, T-test statistic, deriving marginal propensity to consumer coefficients from simple regression model. The study revealed that female, (55%) constitute the majority of the employees in the study area. Most of the workers are young and energetic and represented the active labour force. Majority (69.17%) of the workers are married which indicated that a substantial part of their income was devoted to family upkeep. The empirical results further showed that there was a significant relationship between food consumption and expenditure on savings, investment, education, transportation and house rent at ($p<0.05$). It was further observed that workers spend more money on food and other things as they receive their salary. However, the marginal propensity to consume (MPC) of low income workers was 0.786 while those of high income workers was 0.965 showing that both groups set aside a large proportion of their income on consumption. It can be concluded that most public servants in Delta State spend more of their income on food, transportation, rent, among others than saves invest. Recommendations are therefore made to encourage workers to save and invest through periodic wage reviews, staff motivation and education, checking the rate of inflation and provision of adequate food at affordable prices.

KEYWORDS: Food Consumption, Expenditure Pattern, Public Servants, Delta State, Nigeria.

INTRODUCTION

Usually the difficulty faced by public servants is not lack of food but lack of purchasing power on the part of households, individuals and in some nations (Gittinger et al 2012). Low income groups in less developed countries suffer from lack of "food security" mainly caused by lack of purchasing power.

The problem is that virtually all the wages earned are spent on consumption by the public servants. This malady is responsible for hunger, malnutrition, disease and the perpetuation of the vicious cycle of poverty.

However, this study is set to examine the consumption and expenditure pattern of public servants in Delta State, Nigeria. The specific objectives of the research include

i. Identify socio – economic characteristics influencing the public servants in the area.

ii. To compare the marginal propensity to consume (mpc) between low and high income groups of the public service.

iii. determine the relationship between income and food consumption, saving, investments, education, clothing, health, transportation and house rent.

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RESEARCH METHODOLOGY

This study was conducted in Isoko North and South Local Government Area of Delta State. The state is located between latitudes $5^{0}20^{1}$N and $5^{0}5^{1}$N of the equator and between longitude $5^{0}05^{1}$ and $5^{0}47^{1}$E of the Greenwich Meridian. The study area is about 610,868, square kilometers (ministry of land and survey) in size with a population of (National Population Commission, 1991). The topology of the area can be described according to Usoeje (2011) as water logged and the soil is allomorphic. The vegetation of the area is rainforest zone.

A sample frame of all governmental establishments in the two Local Government Areas was obtained. The primary data were obtained using well structured set of questionnaire. A total of one hundred and twenty (120) civil servants were selected randomly and interviewed among the Towns and Villages in Isoko North and South Local Government Areas, thereby giving each civil servant an equal chance of being selected. Sixty (60) civil servants were sampled from junior and sixty (60) from the senior cadres respectively.

The tools of analysis used for this study are (i) Simple descriptive statistics (ii) t-Txest (iii) Regression coefficient. Simple descriptive statistics were employed to have a summary description of the data collected. This involved the use of central tendency such as percentages, means and frequency distribution. Multiple regression analysis was used to estimate both low income and high income groups of civil servants. For the t-Test was used to compare food consumption at old and new wage rate. The best regression fit was determined by a combination of criteria of the higher adjusted coefficient of multiple determine (R^2); the level of significance of the overall equation. The model in its general form is:-

$$Y = b_o+b_1x_1+b_2x_2+b_3x_3+b_4x_4+b_5x_5+b_6x_6+b_7x_7+b_8x_8+e_i$$

Where:

Y = Income
b_o = Constant term
b = Unknown coefficient to be estimated
e_i = Unobservable error
x_i = Food consumption
x_2 = Savings
x_3 = Investment
x_4 = Education
x_5 = Clothing
x_6 = Health
x_7 = Transportation
x_8 = House Rent

T-Test specification for hypothesis testing was conducted to confirm the null hypothesis – civil servants minimum wage in Isoko North and South Government Area is not profitable. The formula for the t-Test is given by Spiegel, (1992).

$$t = \frac{\overline{x_1} - \overline{x_2}}{\sigma\sqrt{1/N_1 + 1/N_2}}$$

Where

$\overline{X_1}$ and $\overline{X_2}$ represent food consumption at the old and new wage respectively.

N_1 and N_2 represent sample sizes associated with civil servants of junior and senior cadres.

Marginal propensity to consume coefficients from simple regression model for both low income and high income groups of civil servants.

$$Y = a_o + bc + e_i$$

Where:

Y = Income

a_o = Constant term

b = Coefficient to be estimated which represent elasticity of consumption.

c = Consumption

e_i = Unobservable error

The elasticity of consumption (Ec); the elasticity of dependent variable Y (Gross Income) with respect to independent variable C is

Ec = dy/dc + c/y

But marginal propensity to consume (mpc) = dy/dc

Therefore, Ec, $\overline{Y}$ / $\overline{C}$ = mpc

Where: $\overline{Y}$ and $\overline{C}$ represent arithmetic means.

RESULTS AND DISCUSSION

Since socio-economic characteristics are known to influence the new minimum wage on food consumption and expenditure of civil servants the variables analysed in this study include: Age, sex, level of education, marital status, household size and years of working experience. Table 1 show that 46.67% of the sampled public servants were between the age brackets of 31-40 years. This shows that majority of the sampled civil servants were middle – age. It implies that they are active and effective proportion of the labour force working for government. Among this category are those shouldering family responsibilities. Those in the age bracket of 51-60 were the least with only 14-17%. In this group are those that have reached or about reaching retirement age.

The significant relationship between sex and the civil servant's minimum wage could be interpreted to mean that sex plays a very significant role in civil servants sector. The results showed that males constitute only 45% respondents. This could suggest that most males in the study area are self-employed. Obviously, men are the bread winners hence bear the responsibility for the family's upkeep. Majority of government employees surveyed in the study area were females (55%) government job affords them a dependable source of income with which they are able to render assistance to their husbands for the family's upkeep.

Table 2 also shows that the level of education of the respondents had close association with civil servants income. This study revealed that all respondents appeared to have one form of education or the other as there was no recorded illiterate. This could mean that some level of literacy is required to be able to function effectively as a civil servant. Graduates were in the majority constituting about 33.33% while first school leaving certificate holders were the lowest with a mere 18.33%.

Further analysis shows that only an insignificant number of civil servants were unmarried making up just 30.83%. The majority (69.17%) were married. This means that most civil servants are well established in families. Married ones expend more of their incomes for family use than unmarried ones. The household sizes are large, majority of them have between 6 to 10 members (65.83%) which explains why their food consumption and expenditure patterns are very high.

Most of the respondents, 56.67% have been in civil servant for between 11-20 years. This means that they must have acquired good promotions for higher income to meet their expenditure.

Table 2 represent the comparison of food consumption at old and new minimum wage rate. The result revealed that there is a significant ($p<0.05$) difference between consumption at the old and new wage rates. This result shows that as income rises, people demand for more and better food consumption increases.

The result revealed that the marginal propensity to consume for low income groups of civil servants was 0.98 (table 3). This could be attributed to fact that low income groups devote 98.6% of their income for consumption. Similarly, the mpc for high income groups was 0.7967, indicating that out of their income they spend about 79.67% for consumption. The result revealed that there is a significant ($p<0.05$) difference between the mpcs of low and high income groups. This finding suggests that labour is still grossly under-remunerated as a larger percentage of workers incomes are devoted to consumption, thus leaving little or nothing for savings and investment. This phenomenon cannot allow for economic development. Any measure that can reduce food prices will greatly improve the real incomes of workers.

The relationship between income levels, saving and expenditure pattern is represented in table 4. The result showed that all the independent variables devote 88% of the variation in the dependent variable. All the estimated coefficients except for clothing (x5) have a negative sign. This indicates that as income increase, food consumption, savings, and investment, expenses on education, health, transportation and house rent increases. This could be attributed to the fact that an increase in workers incomes are usually accompanied by general increase in the cost of living. Workers therefore resort to

prioritization of their expenditure. This may have induced reduction in their expenditure on clothing even while their income increased.

The regression coefficients of food consumption, savings, investment, education, transportation and house rent were statistically significant ($P<0.05$). This implies that they are the most important items upon which income is spent. The reason for the insignificant effect of income on health expenses could be accounted for by the fact that as people begin to eat better food with rising income they become healthier and hence do not need to spend much on drugs. Similarly the f-value of the equation was statistically ($P<0.05$) significant and tends to suggest that the joint influence of all the variables on new minimum wage is strong.

CONCLUSION

There was a significant relationship between income and food consumption, savings, investment, educational expenses, transportation and house rent at ($p<0.05$). Workers consumed more food at the new wages the marginal propensity to consume (MPC) of low income workers was 986 while those of high income workers was 7967 showing that both groups set aside a large proportion of their income on consumption.

RECOMMENDATION

Wage increases in Nigeria are normally known to set off an inflationary spiral occasioning a general rise in the cost of living. Workers welfare will greatly receive a boost if they are appropriately remunerated and the necessary mechanism put in place to curtail inflation. This will consequently go a long way in raising the productivity of workers as well as checking corruption.

In order to boost increased welfare of workers the following feasible reform measures are recommended.

- Wage should be upwardly reviewed from time to time, to reflect the present economic realities.
- Wage increases should not be followed by increases in the price of petroleum products as this is capable raising the rate of inflation thereby mitigating the effect of wage increases.
- To improve the real incomes of workers, government should pursue a vigorous food production programmes that will ensure access to food for all people at all times and at affordable prices.

Table 1: Summary of Demographic Characteristics of Respondents.

Items	Variables	Number of Respondents	Distribution (%)
Age in Years Class	20-30	26	21.67
	31-40	56	46.67
	41-50	21	17.50
	51-60	17	14.16
	Total	120	100
Sex	Male	54	45
	Female	66	55
	Total	120	100
Educational Level	FSLC	22	18.33
	WAEC, SSCE,	26	21.67
	GCE or Equivalent	32	26.67
	NCE,OND, B.Sc,HND & above	40	33.33
	Total	120	100
Marital Status	Single	37	30.83
	Married	83	69.17
	Total	120	100
Household Size	1-5	35	29.17
	6-10	79	65.83
	11-15	06	5.00
	Total	120	100
Years of Working Experience	1-10	28	23.33
	11-20	68	56.67
	21-30	14	11.67
	41-50	06	5.00
	51-60	04	3.33
	Total	120	100

Source: Field Survey, 2013

Table 2: Estimated T-Value

Items	Mean Value	Variance	Sample Size	T- Value
Old Wage Rate	5298	19212	120	3.021
New Wage Rate	5333	3794	120	

Significant at 5% level of probability

Source: Field Survey, 2013.

Table 3: Marginal Propensity of Low Income and High Income Groups in Civil Servants.

Items	Range	Variable	Elasticity of consumption	MPC	MPS
Low-income groups	0.1-0.6	7472.982	.500	0.986	0.014
High income groups	0.7 and above	993.825	.204	.7967	0.2033

Source: Field Survey, 2013.

Table 4: Relationship between Income Levels Savings and Expenditure Habits in Civil Servants.

Variables	Regression Coefficient	T – Value
Food consumption (X_1)	.616 *	3.58
Savings (X_2)	.705 *	5.41
Investment (X_3)	1.237 *	4.34
Education (X_4)	1.229*	3.91
Clothing (X_5)	- .234 NS	-.62
Health (X_6)	.176 NS	.32
Transportation (X_7)	2.074 *	3.49
House rent (X_8)	4.339 *	87.90

Source: Field Survey, 2013.

R^2 = 88% F – ratio = 101.963

NS = Not significant at 1 and 5% level of probability. * = Significant at I% level of probability

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