Management of Household Budget In Relation to Erratic Utilities Changes in Ghana

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Abstract
In the wake of recent increase in utility prices across in the Ghana, this cross sectional survey conducted among 100 households in the Ga East Municipality sought to examine its effect on the utility price increases on the budgeting of households and bring to light some of their coping strategies.. Findings revealed utility price increase is a predictor of household budget. It therefore implied that the respondents in the Ga East Municipality are affected with the price increase in utilities as such adjust their budget. Again, using Pearson Product Moment correlation a relationship was depicted that household adjustment to utility price increase was positively correlated and significant with household income (p <.01). Finally, most of the households had resorted to cutting down the use of high-power consuming household equipment such as heaters, microwaves, washing machines etc. as a coping strategy.

Keywords: Consumer behavior, Budgeting, Economy, Management, Inflation

1. Introduction

Household expenditure pattern is presumed to be independently shaped by its own preferences and the consumption budget available. Utilities are one of the major priorities of households hence an increase in utilities always has an effect on the household’s marginal propensity to consume. The effect of an increase in utility differs from each household but the effect would depend on the income level, size and the household’s budget (Magrabi, Young &SeJeong, 1991). A budget is a quantitative expression of a plan for a defined period of time. It may include planned revenues and resource quantities. It expresses strategic plans of businesses and household activities in measurable terms. It uses estimates, or informed guess, about what will be needed in monetary terms to undertake various activities. It seems antecedent factors such as inflation, family income and family size tend to have an effect on the expenditure of households.

Inflation defined by Suramya and Veena, (2005) as the sustained rise in average prices of commodities and services, has been viewed as a major obstacle that most people face in achieving their financial goals and is found to be a major constraining factor in families’ resource management. For instance, with a general inflation rate of 4% and a saving account that has an interest rate of 6%, GHS1000, investment would grow to GHS1060 in a year’s time. However, it will now require GHS1040.00 to purchase the same amount of goods and services that the original investment would have purchased. If one pays taxes on GHS60 or of interest at a tax rate of 28%, the tax contribution would be GHS16.8 (60.00/28%) and individual can keep GHS43.2 (60–16.80). Here, investment of GHS1000/– has only added GHS3.2 to the purchasing power. The situation will obviously be worse if the rate of inflation is relatively higher.

Fiszbein, Giovagnoli&Aduriz, (2002) posits that, the consequences of rising prices and related high cost of living are adverse and cause severe hardships to the families in the form of financial difficulties. The costs associated with financial difficulties are significant for the individuals involved in the households. The close association between financial difficulties and stress related problems within families indicates the
need to address and assess the issue of management practices adopted by the households, when confronting inflation.

Inflation has been on a constant increase and this has caused an increment in the prices of utilities such as water and electricity (Ghana Statistical Service Report, April 2014). Rising prices of consumer goods often compel families to drastically alter their consumption and the composition of their savings. It should also be noted that the impact and incidence of inflation could differ across families with differing income levels. Families therefore respond by employing different coping strategies through the management of their resources,(Owusu,2001). A critical review of selected literature emerging from the African, Latin American, Caribbean and Asian countries that have adopted structural adjustment programs throw light on the multidimensionality of effects at the household level. Major areas of concern involve examining household survival strategies as ways of coping with these impacts of rising utility prices in Ghana.

To achieve this the study objectively sought to identify the effect of utility increase on household budgeting, examine the relationship between budgeting and utility price increase and assess the coping strategies adopted by different income groups in the wake of rising cost of utilities in the Ga East Municipality in the Greater-Accra Region of Ghana.

2. Literature Review

Family Budget

Compton et al. (2008) expresses household budget as a plan for future expenditure of a given household. Family budgeting is indispensable if family needs are to be met. Poor budgeting leads to wasteful expenditure of income. Family needs are usually many, but often with limited income therefore, good budgeting has become imperative for households. This is contingent on the available income to the household or family. Income of a family is the amount of money which the family has at a given period. It is the purchasing or buying power of the family at a given period of time. Sources of family income include salaries, wages, gifts, tangible assets or investment that yield income such as rents, dividends, etc.

Primary and Secondary Needs of the Family

Family needs are those things on which the family members are willing to spend their income. Family budgets are therefore made on family needs. These needs are divided into two main classes; primary and secondary needs.

Primary Needs

These are the very important needs for good health and survival of the family unit and include food, clothing, shelter and health care delivery.

Secondary Needs/Wants

Are also desirable but the family can do without. Examples are fashion, designer clothing, luxurious cars, and vacations at exotic destinations etc. (www.almuminaatng.org)

Preparing Family Budget

The Family Income

These budgets are made on the net income of mostly the breadwinner of the family. If it is personal budget, then it has to be based on personal income, for instance, your pocket money.

Family Needs

Determine the specific goods and services which will be budgeted for. These specific goods and services will be based on family or personal needs.
Family Size

This is the number of people in the family. Their ages and sexes must also be considered because these influence a family budget.

Family Values

Value is the worth placed on something. Every family has a set of values. These values influence the choice which the family makes among alternatives. For example, a family that value education more than luxury might spend money on education rather than on luxurious living.

Season and Climatic Conditions

Some food stuffs are plenty at certain seasons of the year and scarce at others. Food is cheaper at period of plenty for instance at period of harvest, but expensive when it is scarce. This fact, therefore, determines the amount of family income to be spent on food at a given time.

Geographical Location

This is the area where a family lives. It will influence family budget in different ways. For instance, it will affect the distance to school, place of work and therefore amount of money spent on transport. It will also determine the types of food available to the farming to budget for and purchase.

Inflation Rate

This is continuous upward movement in general price level. When this occurs, the prices of goods and services become high. The family has to budget more money for each item. (Source: www.kidspot.com.au/family budget)

The Theory of Consumer Behavior

Loudon and Bitta (1993) define consumer behavior as the decision process and physical activity individuals engage in when evaluating, acquiring, using, or disposing of goods and services. Consumer purchase decisions appear to be based on a combination of economic and sociological factors and they could therefore be better understood if the concepts of the two disciplines are combined for the purposes of analysis. Consumers around the world vary tremendously in age, income, educational level and taste, among other factors and therefore buy an incredible variety of goods and services to satisfy their needs (Gary and Kotler, 2000).

According to Kinsey (1988), because majority of people in developing countries have low disposable incomes and because conditions of supply and demand are very different, it is assumed that physiological needs (e.g. food and water) are predominant in developing countries.

She however pointed out that this may not always be the case because of people’s self-concept, cultural values and beliefs individuals subscribe to. Walter (1974) asserted that the poorer the economic outlook, the more important the small luxury of a flavored soft drink or perfumed soap. He emphasized that to the dismay of the would be benefactor, the poorer the malnourished are, the more likely they are to spend a disproportionate amount of whatever they have on some luxury rather than on what they so desperately need (i.e. physiological needs).

The implication is that even though poorer people are supposed to spend more money on their physiological needs, certain cultural and economic factors can compel them to purchase some luxuries they may not desperately need. Thus, consumer behavior can sometimes be too complex to be predicted.

The Ghanaian Household Economy

The traditional household structure in most part of Ghana is based on male-headed units of extended families, consisting of one or several wives and their children and often extended with unmarried or elderly relatives. After marriage the man and wife usually establish their own household and became an independent production and consumption unit. Some couples stayed on in their parents’ compound until they finished building their own house (Bukh, 1979).
Within the traditional household structure, there was a clear division of economic responsibilities as to who was supposed to do what. In sum, the division of labour was clearly defined in a system based on age and sex. With increasing social change brought about by modernization, industrialization and commercialization, several changes have taken place within the structure of the Ghanaian household at different levels, in its composition and in its social and economic organization. With regard to the household structure, it is now evident that a new type of female-headed household has emerged, formed both from necessity and by choice.

In relation to the male-headed household, the analysis, however, shows that the female-headed household form is usually in an inferior situation since the head has to cope with subsistence responsibilities at the same time as her access to resources is poor and limited (Bukh, 1979). The change in the structure of the household has brought with it a change in the pattern of dividing the work and sharing the responsibilities within it. New needs and demands have undermined the traditional division of economic responsibilities within the household. Furthermore, the introduction of money into the family economy has transformed the clear rules regulating economic behavior within the traditional subsistence activities.

The Effect of Tariff Increases on Household budget

The recent upward adjustment in utility tariffs has been the focus of public discourse and the general consensus is that even though the increases are justified, their levels are astronomical. The Public Utilities Regulatory Commission, PURC, reviewed upward electricity prices by nearly 80 percent, while that of water shot up by over 50 percent (gbcghana.com 8/10/2013). Several organizations including the TUC, some political parties, pressure groups and indeed the public have rejected the increases describing them as beyond expectation. The umbrella Labor Movement the TUC for instance says, the increases are well above the pockets of the ordinary Ghanaian worker and therefore urged the government to stay its implementation (gbcghana.com 8/10/2013). The Public Utilities Regulatory Commission, the body charged with fixing the tariffs however says because the tariffs have been gazetted, they have become law and therefore cannot be reduced. Increases in utility tariffs however slightly are sensitive and are likely to send prices of almost all items spiraling. Already sachet and bottled water have been increased by 20 percent because they are largely reliant on water and electricity. Industry is likely to pass on the increase to the consumer The Ministry of Finance, at a recent forum admitted the Ghanaian economy is facing challenges. According to the Minister between January and August this year, the country recorded 11 billion Ghana Cedis from revenue and grants but over 70 percent went into payment of public sector workers leaving very little to finance capital projects. This perhaps, explains why such astronomical increases in utility tariffs have to be slapped on consumers. It must be admitted that cocoa prices on the world market have been largely unstable and the price of gold has dropped significantly thus affecting the country's foreign exchange earnings. What appear to be holding the economy are receipts from oil revenue. Again for good eight months after the December 2012 general elections, the nation was in court haggling over the results. This invariably has had an effect on investments and it would take some time for the country to pull itself out of the woods (Mingle, 2013).

3. Methodology

The descriptive cross-sectional design survey was used to conduct the study. The target units for the study were the households and the target population was the household heads in the Ga East Municipality in Greater Accra Region. This study employed a simple randomized sampling technique to select households in Ashongman Estates, Agbogba, Haatso and Abokobi in the Greater Accra Region.

A random sampling strategy was employed to select 150 households for the study. However, only a hundred households were readily available for the study. Self-designed closed and open-ended questionnaires were designed to solicit responses from respondents using a 5-point Likert scale. Questionnaires were administered in the evening because it was assumed that they might be at work.
during the day. The head of the household was the target in each home. Data was analyzed both quantitatively and qualitatively using the Statistical Package for Social Sciences (SPSS) version 20.

4. Results and Discussion of Findings

Gender of Respondents

This section looked at the background of the respondents selected for the study in the Ga East Municipality. Figure 4.1 below, shows that 65% of the respondents are male whilst the remaining 35% are female. This implies that mostly males are regarded as heads of families and are more involved in finances of homes.

![Fig. 4.1: Gender of Respondents](image)

**Source:** Fieldwork, 2014

Age of Respondents

The responses gathered from the field showed that 67% of the respondents were between the ages of 36-45, 18% within the ages of 46 and above whilst the remaining 15% were between the ages of 25-35 as shown in figure 4.2 below. It therefore implies that majority of the respondents were in their youthful age.

![Fig. 4.2: Age of Respondents](image)

**Source:** Fieldwork, 2014

Marital Status

Figure 4.3, shows that 75% of the respondents are married, and 13% and 12% are divorced and single respectively. It implies that there were three (3) categories of the respondents.
Employment Status of Respondents

It is clear from Figure 4.4 below that 49% and 47% of the respondents are in the formal and informal sectors respectively whilst the remaining 4% are unemployed.

Monthly Income of Respondents

Figure 4.5 provides the monthly income of the respondents in the selected communities of the municipalities. It was clear that majority (53%) of the respondents earned between GH¢ 500-1500.00 per month, 39% earned less than GH¢ 500.00 whilst 7% and 1% earned GH¢1600-2500 and GH¢ 2600 and above per month.
Table 4.1: Regression of Utility increase on Household budget Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
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<tbody>
<tr>
<td>1</td>
<td>.403a</td>
<td>.163</td>
<td>.157</td>
<td>4.252</td>
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</table>

a. Predictors: (Constant), Utility Price Increase

Table 4.2: Anova Table

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F-ratio</th>
<th>p-value</th>
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</thead>
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<td>Regression</td>
<td>519.692</td>
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<td>519.692</td>
<td>28.740</td>
<td>0.000</td>
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<tr>
<td></td>
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<tr>
<td></td>
<td>3195.873</td>
<td>149</td>
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</tbody>
</table>

Source; Fieldwork, 2014

Table 4.3 The Relationship between Household budgeting and Utility Price Increase

Pearson’s Product Moment Correlations

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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</thead>
<tbody>
<tr>
<td>1. Household adjustment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Satisfaction with utility bill</td>
<td>Pearson Correlation</td>
<td>-.254</td>
<td>.256</td>
<td>.256</td>
<td>.256</td>
<td>.256</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.420</td>
<td>.125</td>
<td>.125</td>
<td>.125</td>
<td>.125</td>
</tr>
<tr>
<td>Rate of services being good</td>
<td>Pearson Correlation</td>
<td>.651</td>
<td>.651</td>
<td>.651</td>
<td>.651</td>
<td>.651</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
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<tr>
<td>Current Utility bill affect household</td>
<td>Pearson Correlation</td>
<td>-.021</td>
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<td>-.021</td>
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<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.800</td>
<td>.800</td>
<td>.800</td>
<td>.800</td>
<td>.800</td>
</tr>
<tr>
<td>3. Response to increment</td>
<td>Pearson Correlation</td>
<td>-.355**</td>
<td>.488**</td>
<td>.420</td>
<td>.420</td>
<td>.355**</td>
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<tr>
<td></td>
<td>Sig. (2-tailed)</td>
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<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>4. Household Budget</td>
<td>Pearson Correlation</td>
<td>-.338**</td>
<td>.245**</td>
<td>.312**</td>
<td>.345**</td>
<td>.245**</td>
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<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.002</td>
<td>.000</td>
<td>.001</td>
<td>.011</td>
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</tbody>
</table>

Source; Fieldwork, 2014
This section of the analysis was to help identify the effects of utility increase on household budget. In order to assess that effect, a regression analysis was carried out as depicted in Table 4.1. Regression was significant at 1% level of significance since the p-value of the test was 0.000. Table 4.1 provides support to the fact that there is a relationship between utility price increase and household budget ($r^2 = 0.163, p < .01$). It was also interesting to note that 62% agreed that increase in utility prices has affected the standard of living.

In response to the increase in utility price increases, the researcher sought to analyze the relationship between budgeting and utility price increase among the respondents in the Ga East Municipality. It was shown that household adjustment to utility price increase was positively correlated and significant with household budget ($p < .01$). Thus, the analysis in Table 4.3 provided support to all the variables used to identify the relationship between budgeting and utility price increase.

Coping strategies adopted by different income groups in wake of rising cost of utilities in the Ga East Municipality

Figure 4.6: Household's Preference for appliances due to Price increase

Source; Fieldwork, 2014

The third objective of this study was to identify the coping strategies that the respondents had adopted due to the rising cost of utilities in Ghana. As can be inferred from figure 4.6, it was clear 60% agreed to the fact that utility price increases had altered their households preference for some household appliances. Notwithstanding that, 28% disagreed to the fact that increase in utility prices had changed their preferences for household appliances.

A further question found out the main strategies adopted among the households. It was revealed that 65% carried on educational sensitization among the households in the Municipality. 32% also confirmed that they have been carrying on additional work to support households in the payment of the utility bills.

5. Discussion of Findings

The first objective was to identify the effects of utility price increase on household budgeting. Table 4.3 provided support to the fact that, there is a relationship between utility price increase and household budget ($r^2 = 0.163, p < .01$) hence, utility price increase is a predictor of household budget. It therefore implies that the respondents in the Ga East municipality are affected with the price increase in utility. This brings to bear that, household budgets have been affected. It also means more than half (i.e. 64%) of the respondents standard of living in their households are affected by utility price increments.
Since the new formula for calculating utilities took effect from January 1, 2014, electricity tariffs have gone up by 9.73 per cent while water was increased by 6.8 per cent. The new tariffs, under the Automatic Adjustment Formula (AAF), would be reviewed every three months. As at the time of the analysis, the AAF had been reviewed for the first quarter.

The increases mean that for electricity residential consumers within 0-50 bracket will now pay 15.6750 pesewas per kilowatt hour up from 9.5000 pesewas. Consumers in the 51-150 and the 151-300 brackets would now pay 31.4479 pesewas up from 17.5785 pesewas, those within the 301-600 is up to 40.8134 pesewas and those whose consumption is above 601 would pay 45.3481 pesewas per kilowatts hour. Water residential consumers within the 0-20 cubic metre bracket would now pay 129.5952 pesewas up from 85.2600 pesewas, while those who consume 20 cubic metre and above would pay 194.2712 pesewas from 127.8100 pesewas. The rates for non-residential consumers ranged from 128.1208 pesewas to 785.2928 pesewas.

Due to the increase in prices of utility, the researcher sought to identify the relationship between budgeting and utility price increase among the respondents in the Ga East Municipality. It was depicted that household adjustment to utility price increase was positively correlated and significant with household budget (p < .01). Thus, the analysis in Table 4.3 provided support to all the variables used to identify the relationship between budgeting and utility price increase. This means that, increase in the prices of the utility prices affect the budgets of the respondents..

The third objective of this study was to detect the coping strategies that the respondents had adopted due to the rising cost of utilities in Ghana. It was clear that 60% agreed to the fact that, utility price increases had altered their household’s preference for some household appliances. A further probe revealed that the use of heaters, washing machines and excessive ironing among some respondents had reduced considerably and most had resulted to the use of charcoal, hand washing and bulk cooking. Notwithstanding that, 28% disagreed to the fact that increase in utility prices had changed their preferences for household appliances.

The Public Utilities Regulatory Commission (PURC) announced increment in utility tariffs with the Automatic Adjustment Formula (AAF). In arriving at the tariffs, the PURC considered variables such as the Cedi/Dollar exchange rate, inflation, price of crude oil and natural gas, power purchase costs, chemical costs and electricity costs. It should be noted that the current increase is largely driven by movements in the exchange rates, inflation and the demand variation. The tariff is exclusive of all statutory charges – VAT and NHIL.

Experiences show that majority of the households use electricity for lighting purposes. However some households use electricity for cooking, boiling liquids, ironing, and refrigeration as well as operating radios, TVs and music systems. Surveys conducted in the study areas showed that not many households are using electricity for cooking. High electricity tariffs coupled with difficulties to acquire necessary appliances like electric cookers/burners and others like electric kettle or rice cookers render it impossible for low-income households to use electricity for cooking and boiling liquids.

Under normal conditions high-income households use electricity and/or LPG while the low income families depend heavily on basic sources of energy such as firewood and charcoal (Serenje et al., 1994). When disparities in income levels and the dependence of low-income households on wood energy are taken into account, it is observed that the low-income households spend a large proportion of their income on wood energy.

The implication therefore for increased electricity tariffs has negative implications on the lives of the citizens as well as the environment. Electricity tariffs indicate an increasing trend over the years. This has a negative effect on the households’ budgets especially for cooking purposes. Some residents in the Municipality expressed their concern that the tariffs imposed by ECG since January, 2014 is a threat to sound forests and woodlands conservation. Monthly electricity bills have doubled and for that reason they cannot afford to ECG monthly bills. Hence such customers would switch to using more charcoal than
electricity. Thus, would add stress to the already increased demand for charcoal and therefore, more pressure on woodlands with negative impact on the environment.

A country should be able to distinguish between the cost of the product and the price. If we are able to overcome the issues of cost, the increases from time to time will be quite tolerable and within limits that are affordable to everybody.

6. Conclusion

Inflation has been on constant increase and has caused an increment in the prices of utilities such as water and electricity. Rising prices of utilities often compel families to drastically alter their consumption and the composition of their savings hence respond by employing different coping strategies through the management of their resources. Indeed utility price increase is a predictor of household budget. It therefore implied that the respondents in the Ga East Municipality are affected with the price increase in utilities and as such adjusted their budget. A relationship depicted that household adjustment to utility price increase was positively correlated and significant with household income. Finally, most of the households had resorted to cutting down the use of high-power consuming equipment such as heaters, microwaves, washing machines etc. as coping strategy.

7. Recommendations

Government must adapt strategies such as increase in subsidies to reduce the burden of utility tariffs on the already economically burdened people.

Future researchers could broaden the scope of a related study to include more respondents

Again, future studies could be conducted on longitudinal basis to check if changes would occur to household budgeting over a longer period of time.

References


www.almuninaating.org/form/family budget. Assessed on 15/07/2014