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### SUB-THEME 3: POLICY AND AGRIBUSINESS DEVELOPMENT

#### A REVIEW ASSESSMENT OF RURAL HOUSEHOLDS FOOD COPING STRATEGIES IN NORTHERN NIGERIA: A WINDOW FOR INVESTMENT AND INTERVENTION

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#### ABSTRACT

No household that faces the dilemma of food shortage sit back in despair to allow the problem fester, but deploy various alternatives to combat food shortages. Such mechanisms are termed coping strategies - ranging from food-acquiring activities to change in eating behaviour or short term measures to long term mechanisms. The administration of these strategies is a sure indication that there is food security challenge and the coping strategies adopted defined the severity, type and the duration of food stress. This paper reviewed the coping strategies and objectively assesses their impact on the food security status of the region. Ravaged by the incidences of Boko Haram and communal crises, the northern region as a whole has got her share of induced poor food security situation that have manifested in the reduction in food production, wide spread hunger and malnutrition in some parts of the region. The coping strategies deployed include overt reliance on less preferred and less expensive foods, borrowing or reliance on help from friends or relatives (with FCS scores of 2), limiting the portion size at mealtimes, rationing adult meals and reduction in the number of meals eaten in a day (FCS score 3). These strategies indicate that the households in the regions as a whole deploy more often, less severe coping strategies, implying that food security crisis could be easily reversed if appropriate interventions such as increased support to agricultural sector via input support and improved security apparatus are put in place.

**KEYWORDS:** Rural Households, Coping Strategy, Investment, Intervention, Northern Nigeria

#### INTRODUCTION

The need for up-to-date and continued information on food security status of both households and the nation at large has become imminent, especially for famine early warning and as a tool for proper planning and interventions. In Nigeria, food security is viewed currently as a fundamental objective and an expected outcome of development policies; considering the fact that the country is faced with the diverse challenges of meeting the basic food needs of its ever-growing population (Akinyele, 2009, Adekanye and Ojediran, 2013; Metu *et al.*, 2016). This poor food security situation has been exacerbated by the Boko Haram insurgency (in North East), Nigeria, farmers-herdsmen crisis, amidst environmental issues, which have led to thousands of deaths, displacement of millions of people, and significant reductions in food production and availability with far reaching effects on the northern axes. Thus, the need to prevent hunger, malnutrition and further deaths has become imperative; hence, increased calls for data to describe the food security situation across the country; in order to guide appropriate action (FAO/NBS, 2016).

In an attempt to proffer solution to the aforementioned scenario, a number of scholars and organized bodies (FAO/NBS, 2016, Ojeleye, 2015, Umar, 2014, Ahmed and Dotti, 2014) have variously carried out studies to quantify the issue. The crux of this paper is to examine the coping strategies employed by households in Northern Nigeria during lean seasons and/or to ensure food security, their effectiveness in cushioning the effect of food insecurity and how to leverage on such strategies to ensure food security.

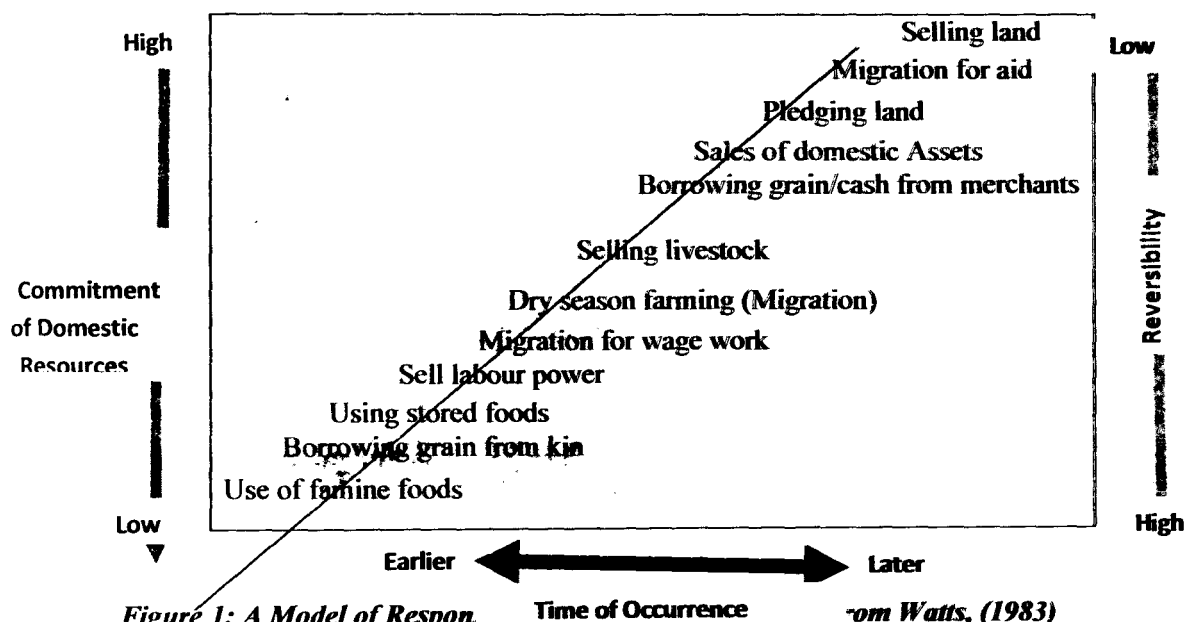
#### Conceptual Issues

No household that faces the dilemma of food shortage sit back in despair, but deploy various alternatives to combat food shortages. Such households engage in diverse coping mechanisms such food-acquiring activities, and/or change in eating behaviour. These responses are known as food-coping strategies. In all food security assessments carried out by World Food Programme, the Food

Coping Strategies is often used to identify the most food insecure households (WFP, 2015). The prevalence of households with poor and borderline food consumption provides essential information on people's current diets and is helpful in deciding the most appropriate type and scale of food security intervention as well as the right target group for the assistance.

Coping strategies in this context encompass all methods used by households to survive when confronted with imminent, unanticipated livelihood failure (Ellis, 2000). The strategies pursued by households under such circumstances differ in several aspects, that is, within the household and between households, largely due to varying degrees of wealth among households (Maxwell *et al.*, 2003). Thus, different coping behaviours are adopted by households at different poverty levels and livelihood opportunities. However, some coping strategies are common to all households, although the extent to which such strategies enable a household to remain afloat depend on the assets at their disposal (Devereux, 2001). Above all, the general tendency is that the lower the household asset status, the more likely the household would engage in erosive responses such as selling off productive assets such as farm implements (Hoddinott, 2004), the administration of Food Coping Strategies indicates a problem and the state of household food insecurity but not necessarily the intensity of the food insecurity.

**Coping Strategy Pattern:** The sequence of responses employed by stressed households are frequently divided in the most literatures into three distinct stages (Corbett, 1988). The earliest stages of crisis (*stage one*) involves a low commitment of domestic resources that enable speedy recovery once the crisis has eased. *Stage two* involves greater commitment of resources just to meet subsistence needs. *Stage three* however involves to a gradual disposal of key productive assets, making it harder to return to a pre-crisis state, signifying signs of failure to cope with the food crisis and it usually involves destitution and distress migration.



**Figure 1: A Model of Respon.**

**Time of Occurrence**

**from Watts, (1983)**

## METHODOLOGY

The study was done by conducting a literature review to identify peer-reviewed journal articles and other relevant literature that reported the food coping strategies especially in northern Nigeria. The study explored a wide range of resources including National Bureau of Statistics (NBS), World Food Programme (WFP), Food and Agriculture Organization (FAO) and the International Food Policy Research Institute (IFPRI) web sites to make critical assessment of food security issues in the region.

## Assessment of Coping Strategy and Food Security Management in Northern Nigeria

The basic idea of using the coping-strategy index tool is to measure the frequency of the coping strategies - how often is the coping strategy used, as well as its severity - what degree of food insecurity does the strategy suggest (Maxwell *et al.*, 2003). Food Coping Strategies are ranked in order of severity and responses weighted so that greater weight is given to more severe measures and then the sum represents the severity of food insecurity. The values are however, dimensionless but the higher scores imply greater food insecurity.

According to Ojeleye (2015), twelve strategies or responses to food insecurity have been identified on the basis of extensive literature survey in Nigeria. The scoring procedure for these strategies as shown in Table 1 revealed that the more severe coping strategies are allocated higher score while the less severe coping strategies scored lower and weights are assigned to each Coping Strategy (FCS) used in the communities in accordance to the method proposed by Maxwell *et al.*, (2003).

The score of each FCS was obtained by multiplying the numeric value presented from the frequency of usage (in this case, 7-day approach) by the weighted number of a coping strategy to derive the coping strategy index (CSI). Thus, all FCS score greater than the average (cut-off) score is rated severe food crisis and vice versa (Devereux, 2001 and Mjonomo *et al.*, 2009).

**Table 1: Ranking Procedure of the Food Coping Strategy**

Ranking	Severity	Severity Ranking
Buying from market	1	2
Eating less preferred food	2	4
Borrowing money/food from friends/relatives	2	4
Rationing adult meal	3	6
Sale of livestock	3.5	7
Working for money	4	8
Consumption of seed stock	4	8
Sending out children to work for money	4.5	9
Scavenging/gathering wild food	5	10
Sale of assets like land, houses	6	12
Stealing	7	14
Migration to city	8	16

**Source: Ojeleye, (2015)**

Thus, the common coping strategies used in the region are to eat less preferred foods; limit portion sizes at mealtimes; or to reduce the number of meals eaten in a day (Table 2). On the average, almost all the strategies employed (except *Yobe*) fall under the first stage of coping strategies model, implying that the food crisis situation can be easily reversed since less resources are committed in easing the situation. The frequency of the type of FCS a household employs to manage rising food crisis have implications for its nutritional status. For instance, adjustment of meals which is the most preferred strategy include reducing the number of meals eaten in a day or going a whole day without eating, substituting less preferred and less expensive foods and limiting portions at meal times especially for adults in the family.

**Table 2: Average Number of Days Households Deployed Specific Coping Strategies (7-day approach)**

State	Rely on less preferred and less expensive foods	Borrow food or rely on help from a friend or relative	Limit portion size at mealtimes	Restrict consumption by adults in order for children to eat	Reduce number of meals eaten in a day
Adamawa	3	1	2	1	2
Bauchi	2	1	1	1	1
Benue	1	1	1	1	1
Borno	3	3	3	3	3
Gombe	1	1	1	1	1
Jigawa	2	1	1	1	1
Kaduna	1	1	1	1	1
Kano	1	1	1	1	1
Katsina	2	1	1	1	1
Kebbi	1	0	1	0	1
Niger	3	1	2	1	2
Plateau	3	1	3	2	3
Sokoto	2	1	1	1	1
Taraba	4	1	4	2	4
Yobe	2	1	1	1	1
Zamfara	1	1	1	0	1
<b>Overall Mean</b>	<b>2</b>	<b>1.1</b>	<b>1.6</b>	<b>1.1</b>	<b>1.6</b>

**Source: FAO/NBS (2016)**

It is worthy to note that, among the households that had had to deploy these coping strategies, a significant percentage in several of the states had high levels of the rCSI i.e. reduced Coping Strategies Index (Table 3). As shown by the use of three different levels of rCSI (rCSI = 0-4, minimum food insufficiency, rCSI = 5-20, stressed food insufficiency and rCSI  $\geq$ 21, crises food insufficiency state (Jones *et al.*, 2013). Collectively, households within the region had rCSI of 5-20, signifying a stressed food insufficiency situation. As outlined in the conceptual model (Watts, 1983) above, the use of these coping strategies attest that the food crisis is transient and reversible since they required low commitment of domestic resources that enable speedy recovery once the crisis and the causes thereof are ameliorated.

**Table 4: Food Shortages in 7 Days Preceding FSVS and Coping Strategies Index**

State	% of Households without Enough Food	Reduced Coping Strategies Index (rCSI)				Sampled Size
		Mean rCSI	% Households with rCSI 0–4	% Households with rCSI 5–20	% Households with rCSI ≥21	
Adamawa	20.90	15.23	10.50	66.90	22.60	124
Bauchi	8.90	11.83	22.60	66.00	11.30	53
Benue	8.10	6.88	47.90	50.00	2.10	48
Borno	36.90	26.59	5.00	36.80	58.20	220
Gombe	12.20	8.86	37.00	56.20	6.80	73
Jigawa	15.40	10.76	21.70	65.20	13.00	92
Kaduna	14.90	8.25	27.40	67.90	4.80	84
Kano	3.90	6.38	38.10	57.10	4.80	21
Katsina	12.70	11.58	14.50	76.30	9.20	76
Kebbi	8.90	5.26	47.20	50.90	1.90	53
Niger	25.70	14.42	30.50	35.10	34.40	154
Plateau	23.80	20.17	8.30	54.10	37.60	109
Sokoto	8.20	6.08	53.10	44.90	2.00	49
Taraba	25.90	23.66	9.20	39.20	51.60	153
Yobe	27.00	11.70	36.90	43.30	19.70	157
Zamfara	11.60	7.49	40.00	51.70	8.30	60
<b>Mean</b>	<b>16.60</b>	<b>12.20</b>	<b>28.12</b>	<b>53.85</b>	<b>18.02</b>	<b>95</b>

Source: FAO/NBS (2016)

**Causes of Food Insecurity in the Region:** Studies have shown that food crisis does not just occur; but are usually precipitated by remote or immediate causes. Some of the causes are individual-induced, some corporately caused, some societal problems, while others are national and international effects of some inadequacies and deficiencies, as stressed by Fadiji and Omokore (2010) and Ojeleye (2015). In their opinions, some of the causes (worthy of highlighting) include: Population growth, Low food crop production, Continuous rise in prices, War/conflicts and crisis (refugee increase), Environmental disasters (e.g. floods, desertification, global warming), Shortage of water supply, External debt over-load, Over dependence on donations/aids/grants and Biofuel development. Among the aforementioned possible causes, the deteriorating food security situation in the north is largely due to population growth, and war/conflicts and crises (Ojeleye, 2015; FAO/NBS, 2016; Umar, 2014; Ahmed and Dotti, 2014). These factors have predisposed the region to varying degrees of food insecurity since the states in the region are mostly agrarian. Thus, any alteration of the agricultural sector would have significant effect on the livelihood means of the households.

## CONCLUSION AND RECOMMENDATIONS

Given that the CSI monitoring tool is a comparative tool, it establishes a baseline within sampled comparative measure from which changes in food security among households can be monitored over time (Maxwell *et al.*, 2003) and comparison of CSI scores gives a good picture of overall household food security and establishes baseline for monitoring trends and the impact of interventions (Devereux, 2001).

From the above assessment, it can be concluded that no state in the Northern axis is immune to food crisis as evident in the use of various coping strategies; though in varying degree of intensity and

severity of food imbalances. Households that are confronted with overt food shortages or that are afraid of losing food security consciously or unconsciously deploy various coping mechanisms to scale down the situation. The type of coping strategies employed depend to a large extent on the severity, type and duration of the food stress; thus, the more the domestic resources are committed, the higher the household's vulnerability to food insecurity. States such as *Borno*, *Taraba* and *Plateau* have 58.20%, 51.60% and 37.60% with  $rCSI \geq 21$  respectively. This is an affirmation that the food crisis is eminent not just in the North East but most Northern States. Nonetheless, few states such as *Sokoto* (53.10%), *Benue* (47.90%) and *Kebbi* (47.20%) fared better with minimal incidences of food insufficiency ( $rCSI$  0-4). Holistically, the strategies deployed here fall under the stressed phase ( $rCSI$  5-20) which can easily be reversed the moment the food crisis situations improve since such strategies are not severely detrimental to livelihoods and future food security. This calls for a renewed efforts to address the overt causes of food crises in the northern region that have, hitherto, plunge the region into a crisis situation.

Given the resilience and reversibility nature of the coping strategies deployed by majority of the households as well as the predisposing factors to food crisis, the study recommends increased support to the agricultural sector to enable the affected states increased their productivity and speedy recovery from their distorted livelihoods. In addition, improvement in security apparatus will not only guarantee safety of lives and properties but will open up widows of investment opportunities across the region, especially in the agricultural sector, that will reposition the region to the path of greatness.

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