

Assessing the Impact of Consumer Behaviour on Food Security in South West Cameroon

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Abstract Food security is a major global issue with over a billion people believed to lack sufficient dietary energy access while others suffer from micronutrient deficiencies. Estimating food insecurity prevalence and patterns is tenuous since there exist no known direct methodology. This paper explores the factors that influence consumer food preferences hence exposing them to food insecurity. It draws on primary oral field data, livelihood surveys and documented socioeconomic activities that combine to create a range of different household livelihood outcomes. Over 400 respondents in six localities of Buea district, Cameroon were interviewed and cultural background, seasonal changes (variation), gender and purchasing power were strong factors driving consumer food preferences hence exposing them to food insecurity.

Keywords: *food insecurity, consumer behaviour, Buea, purchasing power, socio-economics and foodstuff*

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1. Introduction

Within the past decades, food security has remained a major global issue especially in less developed countries (FAO, 2007; Barret et al., 2010). More than 1 billion people are estimated to lack sufficient dietary energy availability while at least twice that number suffer micronutrient deficiencies (Barret et al., 2010; Sunderland and Pottinger, 2011).

The attainment of global food security is described as a situation in which all people and at all times, have access to adequate, affordable, safe and nutritious food to meet their dietary requirements and food preferences for a productive and healthy life (World Bank, 2011; Pinstrup-Andersen, 2009:5). For many developing countries such as Cameroon, food security is commonly conceptualized as resting on three pillars; food availability, accessibility and utilization (Barrett, 2002). While food availability refers to the physical presence of food where it is needed, food accessibility is the means by which people acquire the food they need and food utilization refers to the way in which people make use of food (Barrett, 2002; Pinstrup-Andersen, 2009: 5). These three pillars function in a nested hierarchical way and are greatly intertwined. For instance, adequate food availability is necessary but it does not ensure universal access to sufficient, safe and nutritious food since it is mostly related to social science concepts of the range of individual food choices, income, prevailing prices and access via safety net arrangements

(Fogel, 2004; FAO, 2006). Thus access reflects the demand side of food security, as manifest in uneven inter and intra-household food distribution and in the sociocultural limits on what foods are consistent with prevailing tastes and values within a community. Therefore, the relationship between food security, poverty, socioeconomic and political disenfranchisement is clearly discernable through access. Meanwhile, the concept of utilization explores whether households make good use of the food to which they have access while fostering greater attention to dietary quality, especially micronutrient deficiencies associated with inadequate intake of essential minerals and vitamins (Devereaux, 2009; Barret et al., 2010).

Food security is presently being undermined by a number of challenges such as rapidly growing demand and changes in consumption patterns, competition for agricultural lands for other uses, the effects of global environmental change, serious degradation of agricultural soil, erosion of the genetic base of agricultural biodiversity, water scarcity and poor governance (Goomes and Petrassi, 1996; Batisani and Yarnal, 2010; Yengoh et al., 2010). The 2007–2008 world food crisis (including in Cameroon), tested the resilience of the global food system and revealed deficiencies in its capacity to efficiently adjust to and absorb shocks that show many signs of growing in the future (Yengoh et al., 2010; FAO, 2011b; FAO, 2012sss).

The present study attempts to find out if consumers actually do modify their food preferences, the factors that push consumers towards this modification, how consumers overcome this changing vulnerability, if this

vulnerability exposes these households to food insecurity and finally to explore adaptation strategies at both individual, household and societal levels. The fieldwork was carried out as part of a research project that considered food flight, consumer behaviour and malfunctioning institutional dynamics as drivers of food insecurity in Cameroon and Mali respectively.

2. Methodology

Data were collected between May 2012 through November 2013 from six localities within the Buea district of south west, Cameroon located on the eastern slopes (4°10'0"N 9°14'0"E) of Mount Cameroon some 4100 m above sea level. The region is characterized by social, political and environmental changes with repercussions on the indigenous cultures by adaptation and resilience (Laird et al., 2011). With an estimated population of some 200.000 inhabitants, the district is diverse with the indigenous Bakweri making up some 30% and non-indigenous groups (Francophone Cameroon, Nigeria, the Western highlands and other parts of south west region making up 70% (Schmidt-Soltau, 2003).

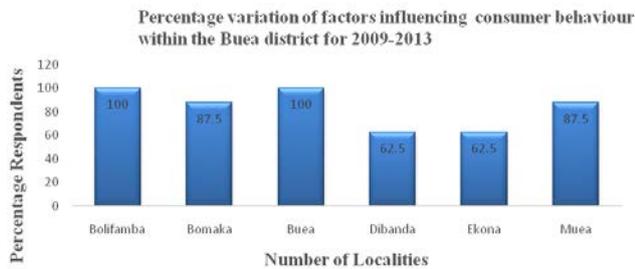


Figure 1. Percentage variation of factors influencing consumer behaviour within the Buea district for 2009-2013

These localities were selected due to their similarity in low economic status and are semi-urban with differing economic activities, social compositions and histories. A participatory two phase research method was used to collect data from over 400 people with heterogeneous backgrounds, diverse social status, both sexes and ages ranging from 15-70. Unlike in state-run surveys, the respondents were not under any duress, motivation and benefits but their participation was voluntary. The first phase dwelled on identifying respondents who had modified their food preferences within the preceding 5 years (post-food riots of 2008). The second phase involved, collecting oral data from respondents and recording them on a prepared form. A summary of the most occurring reasons raised as to why consumers (respondents) modified their food preferences within the past five years were recorded (Table 1). A table summarizing annual variation among the eight factors per locality for the five year period covering 2009-2013 was also done (Table 2). The oral data was then analysed using Microsoft Excel and a graphical representation in variation within the six localities for 2009-2013 was done (Figure 1). Another graph showing a graphical representation in variation among the factors per locality for 2009-2013 was also done (Figure 2). Finally, a cumulative sum of all factors identified for each year and locality was used to plot a graph to show the annual trend or variations through 2009-2013 (Figure 3).

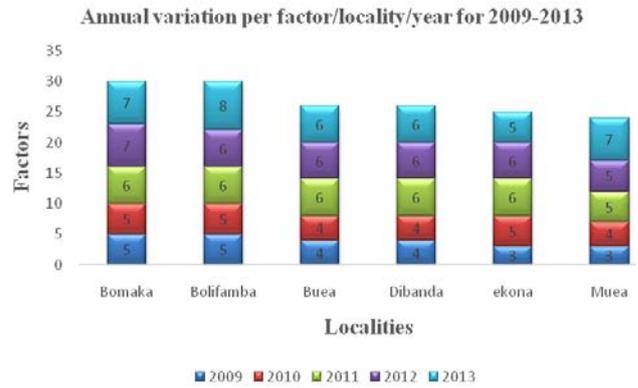


Figure 2. Annual variation per factor/locality/year influencing consumer behaviour within the Buea district for 2009-2013

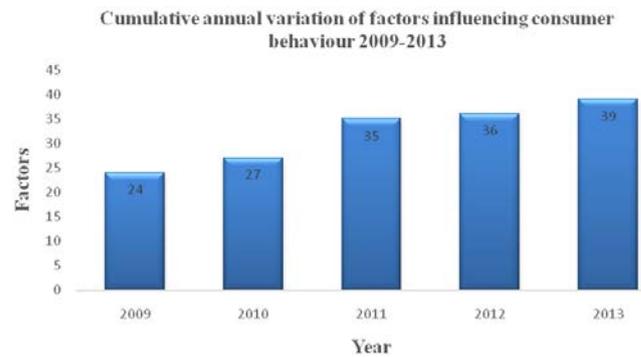


Figure 3. Cumulative annual variation of factors influencing consumer behaviour 2009-2013

These graphs were then used to identify ways in which the various factors played an important role in the modification of consumer food choices. To avoid data inconsistencies and contradictions, a further interactive third phase survey was initiated. This involved surveying local markets, food stores and restaurants to get oral data from food vendors and consumers. These surveys were conducted at different times of the day (Breakfast time or 06:00-10:00; Lunch time or 12:00-14:00 and Dinner time or 18:00-20:00; local time is GMT +1).

Table 1. Factors impacting consumer behaviour within the Buea district 2009-2013 (x denotes presence of factor in locality while 0 denotes absence of factor in the locality)

Factors	Number of Localities Present	Number of Localities Absent
Cultural Background	6	0
Purchasing Power	5	1
Gender	5	1
Age	6	0
Palatability	4	2
Time Frame	5	1
Nutrient Content	3	3
Seasonal Changes	6	0

3. Results

The analysed data showed a strong modification in consumer food preferences within the past 5 years or after the 2008 food riots. These factors included but were not limited to cultural background, age and seasonal changes (variation), gender, purchasing power, palatability and nutrient content. Cultural background, seasonal changes, age, purchasing power or gender and time frame are

stronger factors than palatability and nutrient content. There is also a drop in factors as the distance from Buea to the locality increases as observed in Dibanda and Ekona which are over 5 kms from Buea. There has been a

continuous increase in number of factors influencing consumer behaviour since the food riots as shown in Figure 2 and Figure 3 with the highest being in 2013.

Table 2. Summary of annual variation per factor/locality/year from 2009-2013

Year	Bomaka	Bolifamba	Buea	Dibanda	Ekona	Muea	Cumulative Sum
2009	5	5	4	4	3	3	24
2010	5	5	6	4	5	4	27
2011	6	5	7	6	5	5	35
2012	7	6	8	6	6	5	36
2013	7	8	8	6	5	7	39

4. Discussion

4.1. Food Preferences and Food Security

This study used measures based on household surveys such as to measure the individual characteristics or factors that affect the three of pillars of food insecurity. It used the food expenditure and dietary diversity index which rely on household or individual responses to survey questions about approaches to respond to shocks and past consumption, respectively. It was observed that, modification in food preference diminished as the distance between Buea and a given locality increased. This was true for Ekona and Dibanda for most of its inhabitants are farmers who have very little interaction with urban life, hence less food preferences. As such, they mostly rely on locally cultivated food crops for household consumption. In some rare cases, harvested food crops are sold at the local markets such as to buy a bit of what they need as food supplements. Even if they do consume essential foods from their farms, the diet maybe nutritionally inferior, the food not safe or properly cooked to warrant consumption. These unsanitary conditions may lead to a failure in obtaining, absorbing and metabolizing essential nutrients (Darnton-Hill et al., 2005). Despite these probable setbacks, they are less vulnerable to food insecurity as do those nearer Buea such as Bomaka, Bolifamba and Muea.

In the bigger localities of Buea, Bolifamba and Bomaka, there has been a considerable increase in factors influencing consumer preferences for food since the food riots of 2008. This is due to increase in transportation costs for foodstuff especially during the rainy season and to consumer demand for food because of population increase. Also, the local population is characterized by government or para-public workers who solely depend on buying rather than cultivating. They depend on food supplies from the surrounding localities and from faraway areas of the Bakossi and western highlands. Food hoarding is very common within these localities sometimes as a major to reduce household expenditure. This hoarding may cause a scarcity in the market with a considerable hike in prices in which the poor will be price marginalized, hence prone to food insecurity. This is very common during major end of year or religious festivities where the demand for food always out-ways supply, leading to unprecedented pricehikes.

4.2. Consumer Behaviour and Food Security

Consumer behaviour in this study deals with the household processes used in selecting, securing and

disposing of food products as well as the impacts that these choices have on their entire household (Scot, 1991). These cultural and social choices at the household or individual level is usually motivated by several factors which may expose part of or the entire household to food insecurity (Ellis 2000; FAO, 2012). In all localities, consumers have to make food preferences such as to meet-up with their household needs. This behaviour is influenced by eight major factors (Table 1 above) all falling within the three pillars of food insecurity which are availability, access and utilization.

Food Availability: Younger people (15-30 years) prefer food types often not preferred by older people (30-45 years) and oldest people (>45 years). For instance, these younger people are major consumers of rice (*Oryza sativa*) in all its forms not just because rice is readily available, cheap and light but it takes less time to be eaten or cooked. Therefore, in localities like Dibanda with more individuals above 30 years, rice is not readily available to the smaller youthful population. Modification of food preferences or adjusting to the available food sources is inevitable, exposing them to food insecurity.

Though located at the foot of Mount Cameroon, these localities experience two seasons (dry and rainy seasons like the rest of Cameroon), a bit of humidity mostly in the rainy season (May to October), average temperatures ranging from 18°C (71.6°F) to 25°C (77°F) and extended periods of rainfall characterized by incessant drizzle accompanied by damp fogs with peaks in July and August (Neba, 1999). These seasonal changes influence the availability of seasonal food crops hence may positively or negatively affect its market price. This price fluctuation causes consumers to change their food preferences often going for what is cheaper or readily available. For example, plantains (*Musa paradisiaca*) becomes abundant from December to March with a complimentary price drop. During this period, plantains become a major food within many households compared to foodstuffs like yams, Irish potatoes and cocoyam.

Another major impact of seasonal changes is that, access to food producing areas becomes very difficult especially during the rainy season. During this period, certain foods like vegetables and other perishable foodstuffs experience a drop in supply and become a rare component of household menu. Thus seasonal changes plays a dual role in food availability and accessibility, so it is a major factor that drives food insecurity within Buea.

This study found out that in certain periods of the day, consumers prefer certain foodstuffs at the detriment of others. For instance, breakfast and dinner joints offer mainly light meals while lunch food joints provide heavy meals. In localities where many people prefer heavier

meals to lighter ones such as in Dibanda and Ekona, consumers of these lighter meals would have to modify their food preferences.

Access to Food: The heterogeneous nature of the study area showed diverse preferences for particular food crops especially in Muea, Ekona and Bolifamba. For example, cocoyam (*Colocasia esculenta*) and plantains (*Musa paradisiaca*) are preferred by the indigenous Bakweri tribe while the non-indigenoutribes from the western highlands prefer corn and Irish potatoes. It was observed that in areas with more non-indigenous communities from the western highlands, more of food crops such as corn, Irish and sweet potatoes were mostly consumed. Inhabitants from different indigenous communities living within these areas are food insecure because their preferences are not always available. This forces them to modify their food preferences or adapt by acquiring arable land to farm on and provide themselves with all or part of their missing food preferences. Thus, the supply and demand for certain foodstuffs within a given locality is governed by the cultural background of its inhabitants in relation to the concept of traditional meal.

Furthermore, this study observed that, men (especially unmarried men in Buea, Bolifamba and Bomaka) do not cook meals at home depending on food joints and restaurants for their daily food intake. These men have a preference for traditional dishes and where these are unavailable, they eat non-traditional meals with little satisfaction. More so, most men from the western highlands cannot cook meals because culturally, males hold the vast majority of power and privilege, while females labour mostly in domestic roles in kitchens and on farms (Koopman-Henn, 1989; Simo, 2009). In Buea, women (even working class) do find time to shop and cook their food, so it is not common to find women in food joints and restaurants. Women are more food secure than men especially unmarried men.

This study found that, the socially placed have a greater purchasing power over the district's poor. This social strata exists due to structural biases, ideological prejudices and social stigma of the rich, the powerful and the privilege of the Cameroonian society (Ajaga, 2004). For instance, Buea and Bomaka have a more socially favoured population, which entirely depends on purchased foodstuff. On the contrary, the localities of Ekona, Muea, Bolifamba and Dibanda are mostly composed of a farming population. These farmers harvest food crops from their farms to sell and obtain little economic power permitting them to acquire basic food subsidies like fish and meat. This population usually without jobs, wages and sometimes homes is more vulnerable to food insecurity since they have low purchasing power and are less market competitive (Gsanger and Heufers, 1999).

4.3. Food Utilization

Most respondents around Dibanda and Ekona asserted their preference for self-cooked meals and cultivated food crops that are nutritive and can be consumed in different forms. The socially advantaged respondents in Buea and Bomaka also ascertained the inclusion of vegetables, meat and fish in meals in-order to obtain nutrient sufficiency. For the district's poor who make up about 60%, meeting up with food and nutrient requirements is impossible.

Apart from a couple of farmers whose nutrient and food requirements maybe partially fulfilled with crops harvested from their farms, many people are exposed to food insecurity.

From another point, acceptability of food by the mouth is a major cause for modification of food preferences. For instance, the ease with which some foodstuffs can be eaten has a major impact on consumer behaviour. This is sometimes attributed to culture, tradition, taste, content, attractiveness and smell. Most respondents asserted going in for good smelling or flavoured dishes cooked with much fish, meat and chicken especially in the evenings. The increasing demand for these foodstuffs makes other foodstuffs rare in the evenings forcing consumers to change their preferences. These changes in food preferences as a result of palatability are a major driver influencing consumer behaviour hence food insecurity.

Adaptation Mechanisms: Food insecurity is seasonal and mostly associated with temporary unemployment, episodes of ill health or other recurring adverse events. People anticipate such possibilities and routinely engage in precautionary behaviour to try and mitigate their risk. Hence perceptions-based survey measures consistently find food insecurity rates several times higher than related hunger or insufficient-intake measures (Barret et al., 2010). For the underprivileged, the major adaptation method used to contain this behavioural change is by harvesting food from farms such as to supplement food intake. While for the socially placed, it is by stocking food during times of plenty or by obtaining saving appliances like refrigerators and freezers.

5. Conclusion

Food security remains a challenge in Buea district in particular and Cameroon in general with the proportion of undernourished people increasing every day since the food riots of 2008. However due to socioeconomic, environmental and political factors, large variations are observed from one locality to another as shown in this study. More so, individual household surveys, household perceptions and behaviours to measure food-insecure communities are increasingly becoming more than necessary. Hence, regular and repeated household monitoring would enable tracking food security indicators such as to monitor household and community characteristics, evaluate policy impacts and project interventions across communities.

To better fight food insecurity, programmes to protect food scarcity or facilitate food accessibility could strive to discourage social stratification, structural biases, ideological prejudices and social stigma of the rich, the powerful and the privilege. With the current focus on advocating and assessing food security, much attention could be paid to the broader web of policies such as regulations and laws relating to agro-socio-economic and political issues. Moreso, new land related issues ranging from large scale to agriculture via subsidies, market-based procedures, production and consumption must be at the center of every policy enactment and implementation.

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