



*The government would adequately supplement the energy intake of more households through using cheaper food options. Our findings support the targeting of beneficiary households in food programs because the support needed varies with household income and depth of hunger. A social protection programme that reaches food insecure households in the first, second and third quintiles would ensure over 83% of the ultra hungry, 81% of the medial hungry and 69% of the subjacent hungry are reached.*

**BACKGROUND:** It is now recognized that food and nutrition insecurity is a consequence of poverty. Evidence suggests that a significant proportion of urban dwellers are hard hit by the food crisis emanating from high food prices, stagnating incomes and unemployment. The effects of such food security crisis have serious and far reaching consequences, particularly for poor and vulnerable households.

Through this realization and after a series of hunger/starvation crises, the government, together with partners, is piloting programmes which are aimed at responding to food insecurity that is due to poverty, price-related food crises or emergencies (e.g. drought, floods).

In response to the food security crises in 2007 - 2009, the Government instituted various short term measures using policy instruments that were: trade oriented (reducing tariffs), producer oriented (input subsidy, price support) and consumer oriented (food subsidies, tax reductions and price controls).

Food insecurity and hunger is household specific and hence needs to be tackled at the household and individual levels. Consumer-oriented instruments such as food subsidies are of great interest because unlike the other instruments which mainly act at a macro- level, they act directly on individuals and households. Cash transfers are increasingly being applied as an alternative to traditional food and energy subsidies because they are cheaper to administer and do not distort market

prices (GDI, 2008). To be effective, such programs should be informed by empirical evidence. Questions often asked include: what is the extent of the problem that needs to be tackled? Who is food insecure and should benefit from this program? How much coverage is required? How much is enough?

A key government commitment is to ensure that households, including the poor and vulnerable have access to adequate and quality food. The government of Kenya together with its development partners has been piloting, since 2009, direct cash transfers intended to boost food security at the household level. Through this program, the purchasing power of poor households living in slums in Nairobi was increased by providing them with a cash allowance (monthly) of KES 1,500.00. This allowance was meant to supplement and increase their food consumption. Similar social protection programs include: the orphan and vulnerable children; hunger safety net (HSNP) and others by NGO's such as the initiative by concern worldwide. The cash transfer was unconditional and was targeted at the most vulnerable in the community. Local committees helped in identifying the poorest (neediest) households using selection criteria such as: presence of elderly people; homes headed by a child or persons with terminal illness. Other criteria applied by similar programs were: eating little; low income; poor housing; not benefiting from other programs food subsidy; high dependency (orphan, widows, and elderly). This

program if successful is to be rolled out to other areas of poor urban dwellers.

**OBJECTIVES:** The aims of this brief are two-fold. We begin by drawing attention to food insecurity in urban areas by using empirical evidence on food insecurity among households in Nairobi. Secondly, we assess whether the cash transferred to food insecure households was adequate to reduce hunger. Guiding questions were:

- i. By how much would households need to be subsidized in order to meet shortfall in dietary energy intake? How much more maize grain or maize meal needs to be consumed to meet the shortfall in energy intake? What is the cost of achieving this?
- ii. How does the estimated cost of supplementing household's dietary energy intake compare with the cash transferred to poor and vulnerable households in Nairobi?
- iii. Which is the cheaper option for meeting dietary energy deficit: maize grain or maize meal?

**DATA AND METHODS:** The research explored the extent of food insecurity based on diet quality indicators. The two indicators of food insecurity used were the proportion of households consuming inadequate dietary energy and the depth of hunger, as measured by the extent to which food intake falls below the minimum dietary energy requirement. We used this information to estimate the effectiveness of a cash transfer scheme to poor households. A dietary energy intake of 2,200 kcal/day/ae (IFPRI, 2010), is the minimum consumption that is recommended given body weight, age,

gender and activity. The dietary energy deficit of the undernourished was estimated by subtracting the average dietary energy intake of undernourished people from the minimum energy requirement expressed as a percentage.

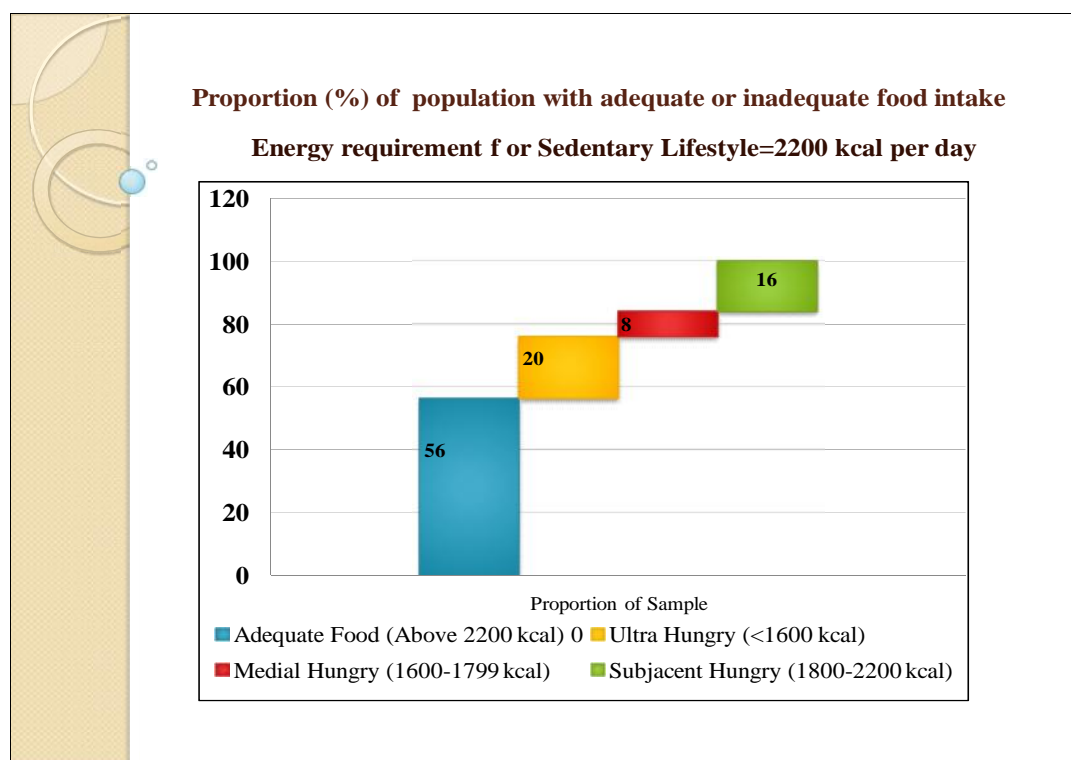
The amount (kg) and cost (KES) of maize (grain or sifted flour) required to meet the shortfall<sup>i</sup> in energy intake was estimated and compared with the cash transferred.

The analysis was based on consumption and expenditure data that were collected directly from 821 households in November 2009. Households in the sample were divided into quintiles (five groups) based on their expenditures. The first quintile had the lowest expenditure whilst the fifth quintile had the highest expenditure.

**MAIN FINDINGS:** Table 1 shows that generally calorie intake increases with income. Households had an average daily per capita dietary energy intake of 2,478 which is slightly above the recommended intake for a sedentary lifestyle. However, the daily per capita dietary calorie intake was inadequate by 24% (a deficit of 524 kilo calories per day per adult equivalent (kcal/day/ae) for the lowest income group (quintile 1).

Figure 1 shows that 44% of Nairobi residents were under-nourished and the undernourished were mainly in the low income groups (quintile 1-3). A staggering 80% of the households in the lowest quintile did not meet the minimum daily requirement for energy; 60% and 40% of households in second third quintile did not meet minimum energy intake.

<sup>i</sup> Difference between the average energy intake and the recommended intake

**Figure 1: Proportion of sample with adequate or inadequate dietary energy intake**

Source: Authors'

Households were further classified into hunger categories. Ultra hungry households had an intake of only 1,228, which is a deficit of nearly 1000 kcal/day/ae. Households with medial

hunger had an intake of 1,708 kcal/day/ae. Subjacent hungry households had an intake of 1,978, which is a deficit of only 10%.

**Table 1: Average energy intake (kcal per adult equivalent per day & deviation (%) in 2009**

Quintile	1	2	3	4	5	Sample
Ultra hungry	1,196	1,316	1,312	1,192	1,078	1,228
	-46	-40	-40	-46	-51	-44
Medial hungry	1,696	1,689	1,735	1,719	1,725	1,708
	-23	-23	-21	-22	-22	-22
Subjacent hungry	1,971	1,963	1,956	2,017	2,008	1,978
	-10	-11	-11	-8	-9	-10
Food Secure	2,628	2,918	2,956	3,212	3,803	3,228
	19	33	34	46	73	47
Average	1,676	2,192	2,437	2,816	3,275	2,478
	-24	0	11	28	49	13

Source: Authors' Computation

Notes: deviations with a parenthesis indicate a deficiency in energy intake.

Up to 20% of Nairobi residents were found to be ultra hungry (i.e. with daily per capita dietary energy intake of less than

1,600 kcal). This group is classified as those that are likely to die (IFPRI, 2010).

50% of households in the lowest income group, 20%

group, 20% and 17% in second and third quintiles respectively fall in the ultra hungry category.

Using the retail prices prevailing in November 2009 for maize grain and maize meal (sifted) the cost of supplementing the deficit in dietary energy intake was estimated. The results showed that it would cost, on average KES 1,528 and KES 865 to subsidize households in first and second quintiles with sifted maize and much less i.e. KES 915 and KES 518 when the supplement is in form of maize grain. Further, depending on the depth of hunger, it would cost KES 1,814 and KES 1,086 to supplement an ultra hungry household and only KES 866 and KES 519 to supplement a household with medial hunger using maize meal and maize grain respectively.

The cash transferred to poor and vulnerable households of KES 1,500.00, was found adequate in meeting the energy deficit in all households except the ultra hungry households in the lowest income group. The ultra hungry in the poorest households would require KES 2,122 to meet the energy deficit using sifted maize meal and so the cash received by these households was 41% lower than this requirement. The cash transferred would however meet the energy deficit for this group if the supplement was from the cheaper maize meal (posho).

### **POLICY RECOMMENDATIONS:**

1. *Supplement dietary energy intake of poor households* particularly those in the first and second quintiles.
2. The government can *stretch current resources* to adequately supplement the energy intake of more households through better targeting and using cheaper food options.

- a. The results support the *targeting of beneficiary households in food subsidy schemes* since the support needed varies with household income and level of hunger.
  - b. The results also lead us to recommend *posho directly hulled from maize grain as the cheaper option for energy source*.
3. Strengthen safety nets for the poor and vulnerable groups in urban areas.
    - a. Social protection programme should *reach food insecure households in the first, second and third quintiles*. This would ensure that over 83% of the ultra hungry, 81% of the medial hungry and 69% of the subjacent hungry are reached.
    - b. Reduce the depth of hunger for the severely undernourished households through feeding programmes, supplement energy intake of undernourished in the first and second quintiles and if possible those in the third quintile through cash transfer schemes
  4. Facilitate the attainment of MDG number 1 and Vision 2030 by *fast tracking the implementation of the Bill on Food Security and Nutrition*

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