

Affordability and comparison of child food prices in Marsabit, Kenya

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Introduction

Poverty is omnipresent in Kenya. In Marsabit County, 56 % of the population are food poor and 24 % live in extreme poverty (Kenya National Bureau of Statistics 2018). The Kenya National Bureau of Statistics computed the minimum amount of money needed to meet the minimum basic food consumption needs. This amount, defined as the poverty line, was in 2015/16 KSh 1954 per person per month in rural Kenya. Kenyans who cannot afford to spend KSh 1954 on food are categorized as food poor, those whose total monthly expenditure per person is less than this are considered to live in hard-core or extreme poverty (Kenya National Bureau of Statistics 2018).

Individuals affected by poverty have lower levels of health, education as well as productivity. Due to their own limitations they are often not able to meet the needs of their own children, creating a vicious cycle leading to intensified poverty (Republic of Kenya 2019). Studies from countries in Sub-Saharan Africa suggest, that affordability is a key factor in providing and improving child nutrition (Ryckman et al. 2021; Tacoli 2017).

People belonging to the bottom of the pyramid follow various coping strategies to supply food to their families: Limited disposable income leads to choosing small to single-size packaging units (Chikweche and Fletcher 2010; Weidner et al. 2010) which are however often more expensive compared to larger ones (Tacoli 2017). Small shops are preferred over larger supermarkets for convenience reasons, but also because they offer credit facilities (Rischke et al. 2015).

According to our knowledge, studies about the pricing of child food in Kenya in relation to the poverty line are not available. The present study compares the prices of various packaged child foods to reveal their affordability and to understand if the coping strategies of parents are similar to those mentioned in other studies.

Data and methods

In the town of Marsabit, Kenya, shopkeepers of small shops and supermarkets offering a wide variety of child food products were interviewed by computer assisted personal interviews. They identified categories of packaged child food items used to feed children from birth up to an age of 60 months and the best-selling and unpopular products in each category. This data, including brand and product name, the category as well as the selling price and size of the packaging unit was recorded using an online form.

To reveal the affordability of child food items, only basic foods like baby formula, milk, porridge and cereals were considered and luxurious items like crisps, biscuits and juice were excluded from the analysis. Product data like serving sizes was collected from the manufacturer's websites. The data was evaluated using simple descriptive statistics.

Results

Data collected

These shop keepers identified 83 child food items that belonged to the following categories: Cereals (27 products), dairy (including baby formula) (26 products), porridge (14 products), crisps (10 products), juice (3 products) and biscuits (3 products). 54 products were best sellers (65 %) and 29 unpopular (35 %). 42 products were manufactured by global brands (51 %), 37 by Kenyan companies (44 %) and 4 by a Rwandan company (5 %).

Affordability of child food

Half of the inhabitants of Marsabit are considered food poor. Using the poverty line definition of the Kenya National Bureau of Statistics we calculated that they therefore can only spend less than KSh 64 per day on average (KSh 1954 / 30.5 days = KSh 64). A single serving of Nestle Nan baby formula, Nestle Cerelac cereals or Weetabix cereals – all produced by multinational companies - costs KSh 80, 88 and 67 and thus more than KSh 64. The locally manufactured bestsellers Toto Afya porridge, Famila baby weaning porridge and KCC fresh milk cost KSh 14, 9 and 30 and consumers at the poverty line can afford 4.6, 7.1 and 2.1 servings per day.

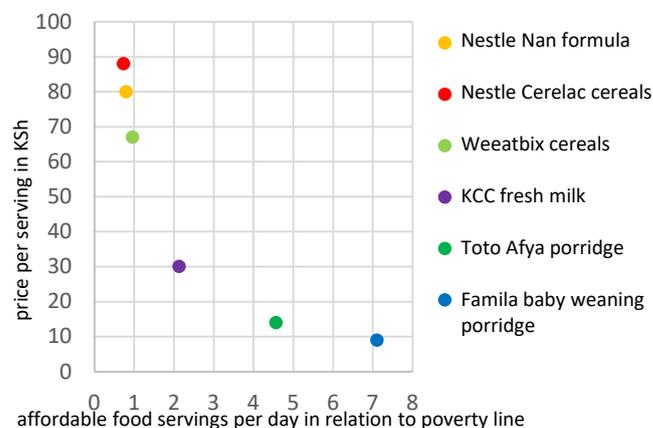


Fig 1: Affordability of child food: Comparison of the prices of global and local brands in relation to the Kenya poverty line

Product prices, its influence on purchases and a pricing comparison between different packaging sizes and venues

The comparison of packaging sizes in relation to best-sellers and unpopular products showed the following: The 200 g Nestle Cerelac packaging unit was mentioned three times as a best-selling product in shops, but customers frequenting shops were not interested in the same product's larger, 400 g packaging unit, which was however identified as a best-seller in both supermarkets. The same applies to Weetabix, where customers

frequenting shops favour the smaller packaging units (112 – 225 g) and reject the bigger ones.

A comparison of the price per kg of the various packaging units showed that the smaller packaging units are in relation to their content more expensive than the larger ones: Buying Nestle Cerelac in 200 g units works out to KSh 1750 per kg, while the 400 g unit only costs KSh 1625 per kg. The price for Weetabix was KSh 832 per kg when choosing the 112 g packaging unit compared to KSh 667 per kg for the 900 g unit.

Comparison of food prices between shops and supermarkets

Calculating per kg prices of the various packaging units per child food item and comparing the lowest per kg price offered in a shop with the lowest per kg price of that food item offered in a supermarket, the data reveals that child food items are between 0 and 25% cheaper in supermarkets than in shops.

	shop	supermarket	difference
Nestle Nan	3000	3000	0%
Nestle Cerelac	1750	1625	8%
Weetabix	832	667	25%
Famila	150	130	15%
Toto Afya	230	220	5%

Table 1: Comparison of prices per kg in KSh between shops and supermarkets

Discussion

High food prices, the necessity to spend a large part of the available budget on food and the fact that the majority of consumers can only afford a limited range of products result in less diverse and less healthy diets and food insecurity (Raza et al. 2020). The unaffordability of food is a key obstacle preventing the improvement of children's nutrition (Ryckman et al. 2021) and might even expose them to harmful substances, as a study from Kenya discovered that in the case of maize cheaper products had higher aflatoxin levels than more expensive ones (Hoffmann and Moser 2017).

Our data shows that three products produced by multinational brands were considered bestsellers by shopkeepers even when 56% of inhabitants of Marsabit lack the purchase power to afford a daily single serving of these products. The fact that they are named bestsellers could either mean that only parts of the remaining 44% of the population, i.e. individuals with high purchasing power, consume them or that those below the poverty line buy these items but apply the coping strategy of reducing the quantity of food consumed (Tacoli 2017) which could mean for example to reduce the baby formula to water ratio (Viswanathan et al. 2009).

According to our data, consumers in Marsabit prefer the smaller packaging sizes offered in shops over larger ones offered by supermarkets despite the fact that the food items in shops are more expensive. Past studies discovered that due to daily wages, subsistence consumers can only afford buying smaller packaging sizes which are however more expensive (Chikweche and Fletcher 2010; Tacoli 2017) and they prefer to buy from shops instead of supermarkets, even while the prices there are higher, but shops offer credit facilities (Rischke et al. 2015).

Conclusion

The discussion confirms that the majority of inhabitants of Marsabit lack the purchase power to afford certain child food items and have to spend more money than necessary on others. The data further reveals that especially those products manufactured by global brands are unaffordable for them. Further research should be done to compare the nutritional values of cheaper products with more expensive ones, to establish how financial constraints influence the lack of diversity in the diet of children and to develop locally manufactured replacements for the unaffordable products from global manufacturers.

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