

Windhoek research methodology and sampling

This case study of Windhoek in Namibia builds on earlier research by the African Food Security Urban Network which first identified the importance of South African supermarkets in the city's food system (Pendleton et al 2012). This case study is the first of a planned series examining the role of South African supermarkets in Africa's supermarket revolution.

The research programme in Namibia had five main components:

- **Mapping of Food Retail Outlets:** The spatial mapping of open markets in Windhoek was undertaken by researchers at the Department of Statistics and Population Studies at the University of Namibia. The addresses of outlets were plotted on city maps by name and address and then reduced to scale using GIS.
- **Household food security:** A total of 875 Windhoek households were interviewed using the AFSUN-HCP Household Food Security Baseline Survey which collects a wide range of demographic, economic and food consumption and sourcing data at the household level. Households surveyed in the 10 constituencies of Windhoek were identified using a two-stage sampling design. As a first step, primary sampling units (PSUs) were randomly selected with probability proportional to size. The PSUs were selected from a master frame developed and demarcated for the 2011 Population and Housing Census. Within the 10 constituencies, a total of 35 PSUs were selected covering the whole of Windhoek, and 25 households were systematically selected in each PSU. The sampled PSUs and households were located on maps, which were used to target households for interviews. Table 1 summarizes the number of PSUs identified in each constituency and the corresponding household and population sizes. The survey was implemented using tablet technology.
- **In-depth interviews:** The interviews were conducted in two phases. In the first phase, 36 key informant interviews were conducted. The constituency councillors where the household survey took place were asked to provide the names of people from their respective constituencies who were knowledgeable about the socio-economic, poverty, employment and food security situation in those constituencies. The selection of the informants was stratified by gender, employment status, age and income categories. In the second phase, 20 food vendors were interviewed. They were chosen to represent a variety of operating locations including selling from homes, open markets, major crossroad intersections and construction sites.

Table 7: Household Survey Sample

Constituency	Selected PSU	Sampled house-holds per PSU	Population in the sampled households	Population size in the sampled PSUs
John Pandeni	2	2 x 25	130	559
Katutura Central	2	2 x 25	151	726
Katutura East	2	2 x 25	149	733
Khomasdal	3	3 x 25	247	1,128
Moses Garoeb	6	6 x 25	543	1,648
Samora Machel	5	5 x 25	457	1,682
Tobias Hainyeko	5	5 x 25	372	1,231
Windhoek West	3	3 x 25	254	617
Windhoek East	6	6 x 25	520	1,814
Windhoek Rural	1	1 x 25	78	104
Total	35	875	2,901	10,242