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D3 METHODS REPORT

KENYA END OF YEAR NATIONAL SURVEY

MARCH 16, 2015



Field Dates: November 3-9, 2014

Sample Size: 1,010

Number of Interviewers: 42

Research Provider: Infinite Insight

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I. INTRODUCTION

The Kenya End of Year 2014 National Survey is a face to face survey of the Kenyan population. The sample is representative of the population of adult Kenyans age 18 years and older in the eight provinces of the country.

The questionnaire consists of 59 substantive questions, 12 demographic questions, and 25 management and quality control questions. Fieldwork was conducted from November 3-9, 2014 by Infinite Insight using trained interviewers. Mobile phones were used for data capture.

The average length of a successful interview was 21.54 minutes; ranging from 5 minutes to 84 minutes.

Executive Summary

The sampling methodology, questionnaire design, field team, and overall field experience are summarized in this report.

- The target sample was 1,000. The achieved sample was 1,015 interviews.
- The questionnaire included questions about media use and the political and economic situation in Kenya in addition to questions capturing demographic information, such as age, education level, religion, and work status.
- The average length of the completed interviews was 21.54 minutes; ranging from 5 minutes to 84 minutes.
- Fieldwork was conducted from November 3rd to November 9th, 2014 by 51 Kenyan interviewers and supervisors under the management of Infinite Insight of Nairobi, Kenya.
- The results for this survey, assuming a simple random sample, have a margin of sampling error of ± 3.08 percentage points at the 95 percent confidence level. Accounting for the complex design through a design effect estimate of 2.53, the complex margin of error (CMoE) at $p=.5$, with 95% confidence is 4.90%.
- The final dispositions¹ for all interviews were recorded.
 - In the Kenya End of Year 2104 National Survey, the total number of contacts was 1,695. From this sample, response rate 3 was 62.54%, the cooperation rate

¹ These rates were calculated according to the American Association for Public Opinion Research's criteria. For more details regarding the definitions of these rates, see: "Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys," American Association for Public Opinion Research, 2011, <http://www.aapor.org/AM/Template.cfm?Section=Standard_Definitions2&Template=/CM/ContentDisplay.cfm&ContentID=3156>.

3 was 87.95%, the refusal rate 2 was 8.57%, and the contact rate 2 was 72.28%.

Project Schedule

TABLE 1: PROJECT TIMELINE

Project Phases	Start Date	End Date	Comments
Translation/Approval	10/8/2014	10/22/2014	-
Briefings/Field Setup	10/29/2014	11/3/2014	-
Fieldwork	11/03/2014	11/9/2014	-
Quality control	11/3/2014	11/10/2014	-
Data processing	11/11/2014	11/20/2014	-

II. SAMPLE DESIGN

The target population for the Kenya End of Year 2014 National Survey includes Kenyan citizens age 18 and older.

Sampling Frame

The sampling frame is the 2009 Kenya National Bureau of Statistics (KNBS) Population and Housing Census.

Sampling Methodology

The Kenya End of Year National Survey was a stratified, multi-stage cluster sample.

The sample is *proportionally stratified* by the 8 provinces of Kenya. The sample is distributed proportional to the total population of each province. Each state is then further *proportionally stratified* by **urban/rural** delineations. This results in 15 strata (Nairobi is considered completely urban).

Clusters size was set at 10 interviews. As a result, each stratum's proportional allocation of interviews is divided by 10 and rounded to the nearest whole number to determine the proportional to size allocation of clusters per strata. The minimum number of clusters was 1.

TABLE 2: SAMPLE DISTRIBUTION

Province	Urban Pop	Rural Pop	% Urban	% Rural	Urban Clusters	Rural Clusters
Central	1501343	2868781	4.23	8.08	4	8
Coast	1401886	1788941	3.95	5.04	4	5
Eastern	1192025	4448772	3.36	12.53	3	13
Nairobi	3109861	0	8.76	0	9	0
North Eastern	137172	387544	0.39	1.09	1	1
Nyanza	1334991	4086898	3.76	11.51	4	11
Rift Valley	2214608	6711263	6.24	18.9	6	19
Western	698758	3621951	1.97	10.2	2	10
Total	35504794		32.6%	67.4%	33	67

The following table is a list of inaccessible districts in Kenya that were removed from the sampling frame prior to drawing the sample. The total population of these areas is 2,907,294, about 7.57% of Kenya.

The districts that were removed from the sampling frame were omitted for security reasons. At least 29 people were killed in an attack claimed by al-Shabaab militants in Lamu District, Coast Province in June 2014. The inaccessible districts in Rift Valley are the site of ongoing cattle rustling and banditry; in a security operation in November 2014, 7 police officers were killed and 17 wounded in Turkana South District. Security in the excluded districts of North Eastern province which border Somalia is negatively affected by cross-border weapons smuggling and incursions by al-Shabaab militants.

TABLE 3: INACCESSIBLE DISTRICTS REMOVED FROM SAMPLING FRAME

Province	District	Total Pop	Urban	Rural
Coast	Lamu	100,398	19,625	80,773
Rift Valley	West Pokot	180,498	41,265	139,233
Rift Valley	Turkana Central	253,232	47,101	206,131
Rift Valley	Turkana North	371,671	53,516	318,155
Rift Valley	Turkana South	224,374	0	224,374
North Eastern	Fafi	94,855	2,731	92,124
North Eastern	Wajir South	129,683	8,280	121,403

North Eastern	Wajir North	135,403	0	135,403
North Eastern	Wajir East	223,692	82,106	141,586
North Eastern	Wajir West	169,818	0	169,818
North Eastern	Mandera Central	416,867	67,230	349,637
North Eastern	Mandera East	288,126	87,150	200,976
North Eastern	Mandera West	318,677	23,922	294,755
Total		2,907,294		

Stratification/Allocation of Sample

The total target population was stratified by province and by urban/rural delineations.

TABLE 4: ALLOCATION OF SAMPLE

Province	Target Sample	Achieved Sample
Central	120	120
Coast	90	93
Eastern	160	158
Nairobi	90	97
North Eastern	20	21
Nyanza	150	149
Rift Valley	250	251
Western	120	121
TOTAL	1000	1010

Step 1: The primary sampling unit (PSU) is the sub-location. The sub-locations were drawn with probability proportional to size (PPS) sampling.

If a sub-location was inaccessible, another sub-location within the same district was selected at random as a replacement. If a district was inaccessible, a sub-location from another accessible district in the same province was selected at random as a replacement.

Step 2: Interviewers assembled at a central point in each sub-location. The GPS coordinates of each central point were recorded along with a description of a recognizable landmark or building.

Step 3: Households are the tertiary sampling unit and were selected via a random walk method with a fixed sampling interval performed from the starting point. After spreading out in different directions from the central point, interviewers determined the starting point according to the “day’s code”, for example, on the 3rd of the month interviewers would knock on the door of the 3rd dwelling along the route. Interviewers kept to the left side of the street or path in accordance with the left hand rule.

Interviewers observed a sampling gap of 1 in 3 in low density sample points (skipping two dwellings and knocking at the third) and 1 in 5 in high density sample points (such as neighborhoods with duplexes and multi-story apartment buildings). Multi-story buildings are treated as streets: starting from the top floor, interviewers work their way down observing the 1 in 5 sampling gap.

Step 4: Interviewers used a Kish grid to select individual respondents within an eligible household. Only qualifying members of the household, i.e. Kenyan citizens, aged 18 and above, were listed. To achieve an even distribution by sex, on Kish-grids with an even serial number, only qualifying male household members were listed; if the serial number was odd, only qualifying female household members were listed.

Sampling Methodology

Weighting

Sampling weights were applied to the data to account for differing probabilities of selection. No other weighting was done.

Margin of Error and Design Effect

The results for this survey, assuming a simple random sample, have a margin of sampling error of ± 3.08 percentage points at the 95 percent confidence level. Accounting for the complex design through a design effect estimate of 2.53, the complex margin of error (CMoE) at $p=.5$, with 95% confidence is 4.90%.

III. FIELD IMPLEMENTATION

Selection of the respondent, call-backs, and substitutions

One respondent per household was selected using the Kish grid. To achieve an even distribution of male and female respondents, on Kish grids with an even serial number only qualifying male household members were listed; if the serial number was odd, only qualifying female household members were listed.

If the designated person is not at home, an appointment is made to interview the designated person at a later time.

Call Back Protocol

After three attempts, the household is recorded as a non-contact and a new household is substituted into the sample. Substitution of respondents at any given household is not allowed.

- Interview Completed at the First attempt: 97.3%
- Interview Completed at the Second attempt: 2.7 %

In some remote rural areas, only same-day call backs were possible. If the designated person was not available for an interview on the same day as the first interview attempt, a new household was selected according to the household selection procedures described above.

Field Outcomes

In addition to the inaccessible districts that were removed from the sample frame prior to drawing the sample, two sampling points (as well as the two alternative sampling points from the replicate sample for the same district) were inaccessible during the fieldwork period due to an ongoing military crackdown on illegal firearms. The inaccessible sampling points were replaced by selecting sub-locations in accessible districts in the same province.

TABLE 5: SAMPLE POINT SUBSTITUTIONS

Original Sampling Point			Replacement Sampling Point		
Province	District	Sub-location	Province	District	Sub-location
Rift Valley	East Pokot	Nasorot	Rift Valley	Narok North	Parkarara
Rift Valley	Pokot North	Nauyapong	Rift Valley	Koibatek	Makutano

IV. THE FIELD TEAM

A total of 42 interviewers, 4 supervisors, 3 team leaders, and 2 field managers worked on this project. There were a total number of 51 staff who participated in the project. Field staff range in age from 21 to 37 years old.

The following table shows the number of male and female interviewers and supervisory staff.

TABLE 6: DESCRIPTION OF FIELD TEAM

	Gender		Education		
	Female	Male	Degree	Diploma	O Level
Field Managers		2	2		
Supervisors	1	3	3	1	
Team Leaders	1	2		3	
Interviewers	15	27	1	32	9
Total	17	34	6	36	9

Training of Interviewers

All interviewers for the project are trained on the fieldwork skills of the Marketing and Social Research Association (MSRA). The training addresses sampling procedures including the random route walk, starting points based on the day's code, and the sampling gap; the implementation of the Kish grid; and call-backs and substitution protocols.

All supervisory staff (field managers, supervisors, and team leaders) participated in a pre-field briefing led by staff from Infinite Insight and D3 Systems. The pre-field briefing consisted of a review of the questionnaire, mock interviews, a review of the sampling plan and a review of the MSRA field training guide. The procedures for completing the Kish grid and the contact sheet were also reviewed. Supervisory staff asked questions and were prompted to respond to hypothetical situations they might encounter while in field.

V. SAMPLE DISPOSITION

TABLE 7: DISPOSITION RESULTS

SURVEY MANAGEMENT SECTION			
Field Code	AAPOR Code	Description	
Completed Interviews			
55	1.0/1.10	Interview was successfully completed	1015
Unknown Eligibility			
2	3.130	No answer at door	151
3	3.200	No adults (18+) after three visits	116
1	3.170	Unable to access building or house	31
7	3.210	Outright refusal at the door	152
		Total Unknown Household	450
Non-contacts			
13	2.210	Selected respondent never available for interview	19
		Total Non-contacts	19
Others			
12	2.320	Selected respondent physically or mentally unable to complete the interview	4
5	2.332	Selected respondent unable to complete interview in languages available	15
		Total Others	19
Refusals			
8	2.11	Selected respondent not feeling informed to answer the questions	56
9	2.11	Selected respondent got angry because of the subject matter	7
10	2.11	Selected respondent prefers head of household to be interviewed	12
11	2.11	Selected respondent in a hurry/no time	64
		Total Refusals	139
Not Eligible			
20	4.7	Does not meet screening criteria/not eligible for interview	14
4	4.500	Non-residential (business)/abandoned home	39
		Total Not Eligible	53
Total		Total Sampled Households	1695

DISPOSITION RATES		
RATE	FORMULA/CALCULATION	PERCENT
Value for e	estimated proportion of cases of unknown eligibility that are eligible	0.957
Response Rate 3	$I / (I+P)+(R+NC+O)+e(UH+UO)$	62.54%
Cooperation Rate 3	$I / (I+P+R)$	87.95%
Refusal Rate 2	$R / (I+P)+(R+NC+O)+e(UH+UO)$	8.57%
Contact Rate 2	$(I+P+R+O) / (I)+(R+NC+O)+e(UH+UO)$	72.28%

National Population Data vs. Realized Sample

The following urban/rural data comes from the 2009 Kenya National Bureau of Statistics (KNBS) population and Housing Census.

TABLE 8: URBAN/RURAL STATUS OF SAMPLE VS. POPULATION

	Population %	Target Sample	Realized Sample (unweighted)
Geographic Code			
Urban	32.6%	32.6%	33.5%
Rural	67.4%	67.4%	66.5%

VI. QUALITY CONTROL METHODS

Field managers, supervisors and team leaders accompanied interviewers in the field. Half (51%) of interviews were subject to quality control and back-checks: 13.3% of interviews were supervised and 38.1% were back-checked by phone from the Infinite Insight central office in Nairobi.

TABLE 9: METHOD OF QUALITY CONTROL/BACK-CHECK

	% of Interviews
Direct supervision during interview	13.3%
Back check by phone from central office	38.1%

The questionnaire was programmed in Dooblo, an Android-based data collection tool. This eliminated the need for manual key-punching and allowed for immediate review of data once the interview was uploaded from the handheld device.

TABLE 10: BACK-CHECK

Results of Back-Check Controls

	# Interviews Rejected	# Interviewers Terminated	# Supervisors Terminated
Prior to Completion of Interviews	0	0	0
After Completion of Interviews	5	0	0

Describe Problems with Rejected Interviews

Five interviews were removed after the completion of interviews. One interview was removed due to the respondent's years of education exceeding his age. Four interviews conducted by Interviewer 7 were deleted for having more than 90% identical responses to substantive variables.

Outlook for Future Studies

The outlook for future studies in Kenya is positive. To improve on the fieldwork procedures carried out in this study, the following refinements should be considered:

The Kish grids and contact sheets were hard copies while the data was recorded on hand-held devices. In some instances interviewers did not correctly enter the serial number stamped on the Kish grid into the handheld device. This was resolved by comparing the Kish grid sheet with the contact sheet and sampling information. Further training on the proper entry of the serial number should be incorporated in the next project.

Separate paper contact sheets, while allowing for the recording of information needed for call backs, can be overlooked when the focus is on the use of the handheld device. Further training on the prompt and accurate recording of interview outcomes (such as refusals and non-contacts) should be included in the next project.

Events in the Country

The following events happened in Kenya during the fieldwork. These events might have had an effect on survey operations and survey findings.

- Kenyan President Uhuru Kenyatta was under indictment by the International Criminal Court on charges of crimes against humanity for his role in the 2007 post-election violence. President Kenyatta appeared before the court in the Hague on 8 October 2014 and news of the case against him was reported by various press outlets during the fieldwork.
- On 1 November, 2014, 20 Kenyan security officers were killed in an attack by bandits in Kapedo, in Turkana East district.
- On 2 November, an attack by a separatist group on a military barracks in Mombasa killed one officer and injured several others.

VII. REFERENCES

The American Association for Public Opinion Research. 2011. *Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys. 7th edition.* AAPOR.