Namibia - Namibia Household Income and Expenditure Survey, 2015/16

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Overview

Identification

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NAM_NSA_201516_NHIES_VO4

Version

VERSION DESCRIPTION
NHIES 2015/2016

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2018-03-14

Overview

ABSTRACT
The Namibia Household Income and Expenditure Survey (NHIES) 2015/2016 edition is the fourth of its kind to be executed in Namibia and the first to be carried out by the Namibia Statistics Agency (NSA) as per its first Strategic plan for the period of 2012/2013 to 2016/2017.

The NHIES is a household based survey, designed to collect data on income and expenditure patterns of households and the sole source of information on income and expenditure in the country. Therefore, institutions did not form part of this survey. Data from the NHIES is used to compute poverty indicators at household and individual levels. The survey also serves as a statistical framework for compiling the national basket items for the compilation of price indices used in the calculation of inflation. It also forms the basis for updating prices or rebasing of national accounts.

The implementation of NHIES 2015/16 was financed by the Government of the Republic of Namibia through the Ministry of Economic Planning sectoral budget. Technical support in the area of data processing, for example, the development of data entry and listing applications was provided by experts from the United States Census Bureau through funding by USAID. In addition, experts from the World Bank (WB) provided technical expertise for during data analysis and sampling.

The main objective of the Namibia Household Income and Expenditure Survey (NHIES 2015/2016) is to provide data to measure the levels of living of the population of Namibian, for example, using actual patterns of consumption and income, as well as a range of other socio-economic indicators. Statistical information from this survey will inform planning and policy making processes at national, regional and international levels in particular the implementation of Fifth National Development Plan, SADC agenda, AU Agenda 2063 and Sustainable Development Goals (SDGs). The NHIES was designed to provide policy makers with reliable, up to date and quality statistics at national, regional levels as well as rural urban disaggregated statistics for planning and decision making purposes.

A representative sample of 10368 households from 864 primary sampling units (PSUs) was selected for the survey. Data was collected over a twelve months period consisting of twenty two survey rounds.

After data processing, 10090 out of 10368 sampled households were used for analysis..

KIND OF DATA
Sample survey data [ssd]

UNITS OF ANALYSIS
Unit of analysis in the survey is private households and individuals.

Scope

NOTES

Access to Services

Education

Housing and utilities

Demographic characteristics

Health

Main source of income

Distribution of annual consumption

TOPICS

Topic	Vocabulary	URI
Population size		
Income and Expenditure		
Education		
Dwelling characteristics		
Anthropometric measurement of children less than 5 years		
Durable assets		
Annual Labour Force		
Main source of income		
Housing and utiliies		
Distance to services		
Ownership and access to assets		
Annual consumption and income		
Distribution of annual consumption		

KEYWORDS

Proportion of households cooking without electricity or gas, Proportion of households with no toilet/use bush, Proportion of households that own a radio, Average annual per capita consumption (N$), Proportion of households that are “poor” or “severely poor”, Poor households (incl. severely poor) -, Severely poor households, GINI-coefficient

Coverage

GEOGRAPHIC COVERAGE

The survey was national and covered representative samples from all 14 regions to

allow for regional, and urban and rural disaggregation at regional and national levels.

Due to financial constraints the survey was not able to collect data at levels lower than

regions, although it was desirable to do so.

The NHIES is a household based exercise which excludes institutional population such as those living in army barracks, prisons, hospitals, hostels and the

likes. However, private households in those institutions if selected were covered in the survey.

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Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
Namibia Statistics Agency	National Planning Commision

FUNDING

Name	Abbreviation	Role
Government Republic of Namibia	GRN	Funding
The World Bank	WB	Techinical suport
United States Agency for International Delopment	USAID	Funding
United States Census Bureau	USCB	Technical suport

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Namibia Statistics Agency	NSA	NSA	

DATE OF METADATA PRODUCTION

2018

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Sampling

Sampling Procedure

The design of the NHIES 2015/2016 differs in comparison to previous NHIES undertakings. One such variation appears in the reduction of the number of households selected from the sampled primary sampling units (PSUs). This was done to increase the geographical coverage and by so doing increase the precision level of survey estimates.
16 Namibia Household Income and Expenditure Survey (NHIES) 2015/2016 Report

Survey Methodology
The number of households to be covered in each PSU have been reduced from 20 in previous NHIES to 12. This procedure increased the total number of PSUs sampled, from 500 in previous NHIES to 864 while keeping the overall sample households fixed. Similarly, the collection period of food transactions such as tobacco, beverage and food items in the households has also been reduced from 28 days in previous NHIES to 7 days.
This new survey methodology was adopted to increase the precision of indicators without significant impact on costs as well as to reduce the time interviewers spend in households thereby reducing the burden of response fatigue.

Target population and the survey population
The target population for the NHIES 2015/2016 was the non-institutional population residing in private households in Namibia. The Institutional population were out of scope for NHIES 2015/2016, however private households found within institutions were included in the target population. In addition, people who were homeless or those who usually reside in those private households, but were in hospital, prison and school hostels during the time of data collection were not eligible for NHIES 2015/2016. Table 2.1 below presents the list of institutional population, which were excluded, from the NHIES 2015/2016.

Sampling frame
The primary sampling frame used for this survey is a list of Primary sampling Units (PSUs) based on the 2011 Population and Housing Census Enumeration Areas (EAs). A PSU can be one EA, part of an EA or more than one EA. A secondary sampling frame for each of the selected PSUs was created for the purpose of selecting the sample households through a listing procedure.

The sampling design
The sample design for the survey was a stratified two-stage cluster sample, where the first stage units were geographical areas designated as the Primary Sampling Units (PSUs) and the second stage units were the households. The up-to-date list of households in the selected PSU were prepared during the listing stage of fieldwork, and 12 households were systematically selected in each PSUs.

The primary sample frame was stratified first by region followed by urban and rural areas within region. The Urban/rural strata were further stratified implicitly by constituencies.
The rural strata were also further stratified implicitly taking into consideration the proclaimed villages, settlements within the rural strata. Once this step was carried out the remaining PSUs in rural strata were implicitly stratified into communal and commercial farming areas. The PSUs within each of these areas were also geographically arranged.

The households in the secondary frame constitute a list of all households for each selected PSU were listed generally following a geographic order. Additional information was collected from the PSUs in the commercial farming areas for the purpose of carrying out further stratification before selecting sample households.

Sample selection
The first stage sample of PSUs was selected from the sampling frame using the probability proportional to size (PPS) sampling together with systematic sampling procedure. Once the PSUs were selected a listing operation was carried out to prepare a fresh list of households then 12 households were selected from the list of households (implicitly stratified) using a systematic sampling procedure. Selection of the sample households were carried out using a CSPro based sampling application.

Substitution of non-responding households
The survey was divided into four quarters and each quarter was further divided into survey rounds. During each survey round, some selected households did not respond to the survey as a result of non-contacts and/or refusals. If one household did not respond in a PSU this case was accepted as non-response. On the other hand if two or more non-responding

households were encountered, then such households were replaced with households from a fresh selection in the same PSU. The replacement households were randomly selected using the CSPro based sampling application, designed to consider households with similar characteristics to the original selected households.

The NHIES sample distribution
The overall sample size was calculated to give reliable estimates of different characteristics at regional level as the lowest domain of estimation. The estimates of the characteristics for all other domains above the regional level will have better precision than the regions. The total sample size was 10368 households. A sample of 12 households were selected within each selected PSU from a freshly prepared list of households just before the interview. The total number of sampled PSUs was 864.

The survey needed to cover seasonal variations in different characteristics and therefore was carried out throughout the year. The survey year consists of four quarters, divided into survey rounds, which were 24 in total. Each survey round was made up of 15 days that a household was required to participate in the survey. The 864 PSUs were randomly allocated to the 24 survey rounds so that the sample selected for each round yield a representative sample at national level. Some adjustments were done when the allocated PSUs were drawn from the same stratum. Hence each survey round covered 36 PSUs that consisted of 432 households.

Sample Realization
The data collection process was followed by the verification of the number of households and PSUs received against the actual sample. This was then followed by structural editing process to ensure completeness of information and once this exercise was completed, the household file and person file was made available for weighting. The household file received had 10090 records, while the individual file had 41581 records, which were used for the weights calculation.

Response Rate

After data processing, 10090 out of 10368 sampled households were successfully used for analysis, resulting in a 97.3 percent response rate which is highly satisfactory as exceeds the NSA target response rate of 80 percent for all data collection in the social statistics domain. The lowest response rate of 94.1% was observed in Khomas region.

Weighting

A representative sample of private households was selected using the updated National sample frame and in accordance with a scientific procedure to partake in the survey in order to provide valid and reliable data and sample estimates.

Each selected household had to participate in the interview for a period of two weeks known as a survey round after which a new set of households or subsample was selected.

Weighting is a process of accounting for the selection probabilities and non-response in a sample survey. The inverse of these selection probabilities adjusted for non-response is called the design (base) weight. For the calculation of income and consumption per capita aggregates, weights calibration was required to get the required population and households weights for the calculation of per capita indicators. Assistance was sought from experts from the World Bank as there was no internal expertise to do weight calibration as required.

A detailed weighting description is provided in the 2015/16 NHIES Basic report.

Questionnaires

Overview

Two Forms (questionnaires) were used to record information on consumption and income using a face-to-face interview method. Form I recorded demographic information and transactions of infrequent nature like purchases of durable goods as well as other information from other modules while Form II or daily record book (DRB) was used to capture information of daily transactions such as buying of bread, presents given to members of households and gifts given outside the household, etc. during the survey round. Households were shown how to record daily transactions. However, where there were no literate persons in the households, interviewers visited them on daily basis in order to help with daily DRB recordings.

Data Collection

Data Collection Dates

Start	End	Cycle
2015-03-27	2016-03-21	22 Survey rounds

Time Periods

Start	End	Cycle
2015-03-27		22 survey rounds

Data Collection Mode

Face-to-face interviews [f2f]

Data Collection Notes

1. Each interviewing team comprised of 2 interviewers and 1 team supervisor.
2. Interviews were conducted primarily in English.
3.The evaluation of the pilot survey was done.
4.There were 9 x Information Technology Field Technicians (ITFT) who provided IT support to the regions. Two (2) ITFTs were allocated to each region except for the Zambezi region.

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Data Collectors

Name	Abbreviation	Affiliation
Namibia Statistics Agency	NSA	Mimnistry of Economic Planning and National planning Commision

Supervision

The issue of data quality is critical to the production of official statistics because it enhances the credibility of data and the institution that produces them. Therefore, NSA places data quality at the core of its statistical work across and data collection activities including this survey, to increase data use. Great efforts were made to check and ensure that collected data were relevant, reliable, accurate and timely.
Therefore, to achieve these attributes, consultation with key stakeholders were carried out, use of sound survey approach and sampling methodology, provision of adequate training, well developed questionnaires and training manuals including "Data quality assurance manual", capturing data with Tablets with in-built editing rules and regular field visits by the monitoring teams routinely were carried out or as the need arise. The monitoring teams consisted mainly of national supervisors were dispatched to regions at the beginning of each quarter to ensure that field work commenced as planned. Monitoring teams also conducted control interviews in the same households, which had been covered by the interviewers

and sat in some interviews to observe how interviewers conducted the interviews. Furthermore, monitoring was also done on a daily basis from the head office through submission of daily monitoring reports from Regional Statisticians. The division for Quality Assurance took several field trips to undertake quality audits during field work and evaluate whether field staff were following stipulated guidelines for data collection. The comprehensive and completeness of the data collection were also audited, and further control measures were introduced to improve data collection. All survey quality checks were guided by quality guidelines for data collection as prescribed in the Data Quality Assurance and Interviewer Manuals.
Finally, it is worth mentioning that this edition of the NHIES was the first NHIES to make use of the computer assisted personal interview methodology, using the CSPro-based application in Tablets. This methodology was implemented with the aim of improving efficiency and thus data quality.

The main survey consisted of regional field teams managed by the Regional Supervisor (statistician). There were 9 x Information Technology Field Technicians (ITFT) who provided IT support to the regions. Two (2) ITFTs were allocated for each region except for the Zambezi region which was allocated one (1) ITFT because of its long distance from other regions. The ITFTs worked closely with the Regional Supervisors. Each field team consisted of a team supervisor and 2 interviewers. Each interviewer was responsible for 6 of the 12 selected households in each PSU. Field personnel were recruited from their own areas since they were familiar with the local terrain/locality and to facilitate interviews in local languages. In total, 54 teams comprising of 162 field staff were in the field during first quarter of the data collection. This number was further reduced from quarter 2 to 4 to a total of 36 teams and 108 field staff.

Data Processing

Data Editing

Data entry application was built with many consistency checks, skipping patterns and other validations such as maximum and minimum acceptance range per variable. Supervisors were given minimum variables to check on a day-to-day basis, especially for other - specify (notes) variables. As a result, data consistency checks, coding and validation was done at field level. This minimized the time spent on post data cleaning, validation and editing process.

Other Processing

The data processing methodology that was adopted for this study was the Computer Assisted Personal Interview method (CAPI). Data management tools to collect, transmit and store and clean (primary editing and recoding) survey data were designed and developed using CSPro 6.3.

Data Appraisal

Estimates of Sampling Error

The sampling error of a particular statistics is measured in terms of the standard error of that statistics which is the square root of the variance. The standard error is the standard deviation of the statistics which measures the variability in the estimates around the expected value. The standard error given in this report were estimated using the Taylor series Linearization method in Stata 12.1 program.