Namibia - National Household Income and Expenditure Survey 2009-2010

Namibia Statistics Agency

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Overview

Identification

ID NUMBER
NAM_2009_HIES_v01_M_v01_A_PUF

Version

VERSION DESCRIPTION
- v01: Edited, anonymous dataset for public distribution.

Overview

ABSTRACT
The Household Income and Expenditure Survey is a survey collecting data on income, consumption and expenditure patterns of households, in accordance with methodological principles of statistical enquiries, which are linked to demographic and socio-economic characteristics of households. A Household Income and expenditure Survey is the sole source of information on expenditure, consumption and income patterns of households, which is used to calculate poverty and income distribution indicators. It also serves as a statistical infrastructure for the compilation of the national basket of goods used to measure changes in price levels. Furthermore, it is used for updating of the national accounts.

The main objective of the NHIES 2009/2010 is to comprehensively describe the levels of living of Namibians using actual patterns of consumption and income, as well as a range of other socio-economic indicators based on collected data. This survey was designed to inform policy making at the international, national and regional levels within the context of the Fourth National Development Plan, in support of monitoring and evaluation of Vision 2030 and the Millennium Development Goals. The NHIES was designed to provide policy decision making with reliable estimates at regional levels as well as to meet rural - urban disaggregation requirements.

KIND OF DATA
Sample survey data [ssd]

UNITS OF ANALYSIS
Individuals and Households

Scope

NOTES
Household: Covers the household composition and particulars of each person in the household, education, employment, housing, access to water, toilet facilities, sources of income, ownership, access to clinic, farming, cost of housing, services, expenditure, income.

Coverage

GEOGRAPHIC COVERAGE
National Coverage

UNIVERSE
Every week of the four weeks period of a survey round all persons in the household were asked if they spent at least 4 nights of the week in the household.

Any person who spent at least 4 nights in the household was taken as having spent the whole week in the household. To qualify as a household member a person must have stayed in the household for at least two weeks out of four weeks.

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
Namibia Statistics Agency	

FUNDING

Name	Abbreviation	Role
Government of the Republic of Namibia		Funder
United Nations Development Program	UNDP	Funder
Grand Duchy of Luxemburg	Lux Development Cooperation	Funder

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Development Data Group	DECDG	The World Bank	Documentation of the DDI

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Sampling

Sampling Procedure

The targeted population of NHIES 2009/2010 was the private households of Namibia. The population living in institutions, such as hospitals, hostels, police barracks and prisons were not covered in the survey. However, private households residing within institutional settings were covered. The sample design for the survey was a stratified two-stage probability 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 PSUs were based on the 2001 Census EAs and the list of PSUs serves as the national sample frame. The urban part of the sample frame was updated to include the changes that take place due to rural to urban migration and the new developments in housing. The sample frame is stratified first by region followed by urban and rural areas within region. In urban areas further stratification is carried out by level of living which is based on geographic location and housing characteristics. The first stage units were selected from the sampling frame of PSUs and the second stage units were selected from a current list of households within each selected PSU, which was compiled just
before the interviews.

PSUs were selected using probability proportional to size sampling coupled with the systematic sampling procedure where the size measure was the number of households within the PSU in the 2001 Population and Housing Census. The households were selected from the current list of households using systematic sampling procedure.

The sample size was designed to achieve reliable estimates at the region level and for urban and rural areas within each region. However the actual sample sizes in urban or rural areas within some of the regions may not satisfy the expected precision levels for certain characteristics. The final sample consists of 10 660 households in 533 PSUs. The selected PSUs were randomly allocated to the 13 survey rounds.

Deviations from Sample Design

All the expected sample of 533 PSUs was covered. However a number of originally selected PSUs had to be substituted by new ones due to the following reasons.

Urban areas:
Movement of people for resettlement in informal settlement areas from one place to another caused a selected PSU to be empty of households.

Rural areas:
In addition to Caprivi region (where one constituency is generally flooded every year) Ohangwena and Oshana regions were badly affected from an unusual flood situation. Although this situation was generally addressed by interchanging the PSUs betweensurvey rounds still some PSUs were under water close to the end of the survey period.
There were five empty PSUs in the urban areas of Hardap (1), Karas (3) and Omaheke (1) regions. Since these PSUs were found in the low strata within the urban areas of the relevant regions the substituting PSUs were selected from the same strata.
The PSUs under water were also five in rural areas of Caprivi (1), Ohangwena (2) and Oshana (2) regions. Wherever possible the substituting PSUs were selected from the same constituency where the original PSU was selected. If not, the selection was carried out from the rural stratum of the particular region.
One sampled PSU in urban area of Khomas region (Windhoek city) had grown so large that it had to be split into 7 PSUs. This was incorporated into the geographical information system (GIS) and one PSU out of the seven was selected for the survey.
In one PSU in Erongo region only fourteen households were listed and one in Omusati region listed only eleven households. All these households were interviewed and no additional selection was done to cover for the loss in sample.

Response Rate

Household response rate:
Total number of responding households and non-responding households and the reason for non-response are shown below. Non-contacts and incomplete forms, which were rejected due to a lot of missing data in the questionnaire, at 3.4 and 4.0 percent, respectively, formed the largest part of non-response. At the regional level Erongo, Khomas, and Kunene reported the lowest response rate and Caprivi and Kavango the highest. See page 17 of the report for a detailed breakdown of response rates by region.

Weighting

Population figures were estimated by raising sample figures using sample weights. Sample weights were calculated based on probabilities of selection at each stage. First stage weight was calculated using the sample selection information from the sampling frame and the second stage weight was based on sample selection information on the listing form. In the second stage some households out of the selected 20 households in a PSU did not participate in the survey due to refusals, non-contact or non-completion of interview, etc. Such non-responding households were few in number and there was no evidence to suggest that the excluded households were significantly different from the responding ones. Hence it was assumed that the non-responding households were randomly distributed and the second stage weights were adjusted accordingly. The final sample weight was the product of the first and the second stage weights.

For detailed estimation procedures and sampling errors refer to appendix 5 and NHIES Methodological Report.

Questionnaires

Overview

The instruments for data collection were as in the previous survey the questionnaires and manuals. Form I questionnaire collected demographic and socio-economic information of household members, such as: sex, age, education, employment status among others. It also collected information on household possessions like animals, land, housing, household goods, utilities, household income and expenditure, etc.

Form II or the Daily Record Book is a diary for recording daily household transactions. A book was administered to each sample household each week for four consecutive weeks (survey round). Households were asked to record transactions, item by item, for all expenditures and receipts, including incomes and gifts received or given out. Own produce items were also recorded. Prices of items from different outlets were also collected in both rural and urban areas. The price collection was needed to supplement information from areas where price collection for consumer price indices (CPI) does not currently take place.

Data Collection

Data Collection Dates

Start	End	Cycle
2009-06	2010-07	N/A

Data Collection Mode

Face-to-face [f2f]

SUPERVISION

Regional statisticians based in all 13 regions were responsible for the overall supervision of all survey activities in their respective regions. Assistant regional, team supervisors, listing clerks and Interviewers were deployed at the beginning of field work in all thirteen administrative regions of Namibia and they were also provided with vehicles, materials and equipment. Survey equipment included digital food portion scales (for measuring weights of food items consumed), jugs, height metres, measuring boards, roller metres and bathroom scales.

Data Processing

Data Editing

The questionnaires received from the regions were registered and counterchecked at the survey head office. The data processing team consisted of Systems administrator, IT technician, Programmers, Statisticians and Data typists.

Data capturing

The data capturing process was undertakenin the following ways: Form 1 was scanned, interpreted and verified using the “Scan”, “Interpret” & “Verify” modules of the Eyes & Hands software respectively. Some basic checks were carried out to ensure that each PSU was valid and every household was unique. Invalid characters were removed. The scanned and verified data was converted into text files using the “Transfer” module of the Eyes & Hands. Finally, the data was transferred to a SQL database for further processing, using the “TranScan” application. The Daily Record Books (DRB or form 2) were manually entered after the scanned data had been transferred to the SQL database. The reason was to ensure that all DRBs were linked to the correct Form 1, i.e. each household’s Form 1 was linked to the corresponding Daily Record Book. In total, 10 645 questionnaires (Form 1), comprising around 500 questions each, were scanned and close to one million transactions from the Form 2 (DRBs) were manually captured.

Other Processing

Data cleaning was carried out in two (2) phases:

Verification:
To ensure that the data from questionnaires were correctly interpreted by the scanner.

Consistency Checks:

Various variables from different parts of the questionnaires were compared and checked for consistency. To facilitate the data cleaning process a large number of scripts were developed for retrieval of scanning errors and inconsistencies in Form 1. Error lists were produced for verification and corrections. At the beginning of the data cleaning process, applications developed for the previous survey 2003/2004, were used for correction of errors. But due to changes in the IT environment the applications stopped working. As there was no time for troubleshooting and repair, corrections during the remaining cleaning process were made directly in the SQL database using SQL scripts. The main part of the data cleaning was carried out from January to September 2011. The final database for retrieval of results was established at the beginning of October 2011.

Database design and contents

After the data were verified and cleaned in the production database (NHIES), a database for tabulation and analysis was designed (NHIESOutput). It was especially adapted to retrieve data from various statistical software packages. A large number of SQL scripts were developed to transfer data from NHIES to NHIESOutput. Value codes and labels were unified and adapted for tabulation, household members and responding households were defined, imputations were implemented where applicable, data covering other periods than one year were annualized, derived variables were calculated, the Classification of Individual Consumption by Purpose (COICOP) used for the daily household transactions, was updated, consumption and non-consumption and income were defined. Finally, the sample weights were calculated based on responding households and added to the database. The output database covers all data recorded, captured and cleaned.

Tabulation

For easy tabulation and presentation of data, a data file was created from the output database in SQL for transfer to the statistical software package SPSS. In the previous survey 2003/2004 the software package SuperStar was used for tabulation. But as SPSS is more commonly used by statisticians at the then CBS, it was decided to use SPSS for the production of tables from NHIES 2009/2010. From SPSS the tables were saved in Excel and customized. From Excel they were compiled to the report in Word. All tables in the main report are stored as SPSS tables, as Excel tables and as a Word document together with other parts of the main report.

Data Appraisal

Other forms of Data Appraisal

To be able to compare with the previous survey in 2003/2004 and to follow up the development of the country, methodology and definitions were kept the same. Comparisons between the surveys can be found in the different chapters in this report. Experiences from the previous survey gave valuable input to this one and the data collection was improved to avoid earlier experienced errors. Also, some additional questions in the questionnaire helped to confirm the accuracy of reported data.
During the data cleaning process it turned out, that some households had difficulty to separate their household consumption from their business consumption when recording their daily transactions in DRB. This was in particular applicable for the guest farms, the number of which has shown a big increase during the past five years. All households with extreme high consumption were examined manually and business transactions were recorded and separated from private consumption.