



**Living Standards Measurement Study- Integrated Surveys on
Agriculture (LSMS-ISA): NON STANDARD UNITS MARKETS
SURVEY**



National Bureau of Statistics

Manual for Interviewers and Monitors

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Contents

1. Introduction.....	3
2. The field officers role.....	3
2.1. Enumerators	3
2.2. Monitors.....	4
3. Understanding the Survey Questionnaire	4
3.1.Suggested States for Market Survey	4
3.2.Administering the Market Survey.....	6
3.3.Survey instrument administration.....	6
3.4.DESRIPTION FOR MARKET SURVEY QUESTIONNAIRE.....	7
4.Use of tablets and troubleshooting.....	14
GENERAL NOTE	14

1. Introduction

In developing countries like Nigeria there are several nonstandard units (NSUs) which are used to quantify the amount of various items. These nonstandard units are mostly common in rural areas where they are used to measure the amount of land and commodities which are usually consumables. Studies that are aimed to analyze household welfare are mainly based on household survey data particularly on household expenditure data. Information on household expenditure is important to analyze living standard, cost of living, level of poverty and consumer behavior which allow to create appropriate policies (Disney et al., 2001). Majority of surveys in developed countries use price information to measure the welfare of household which means income or expenditures are stated in monetary units. However, most surveys in Nigeria (see e.g. the Nigerian General Household Survey (GHS)) use quantities to measure expenditure and these quantities are mainly reported in NSUs. Any analysis using these quantities requires the conversion of the NSUs into standard units and such conversion is not straightforward. Previous experience shows that communities use variety of units and these are often not easily comparable across communities or easily expressed into standard units. Also, in some cases local units with similar name found to differ in size.

Establishing accurate conversion units is thus vital to produce valid measures thereby ensuring the quality of studies based on the measures and, conclusions and inferences made from the findings of the studies. World Bank has announced to conduct a market survey to establish accurate measurement of NSUs for the various crops and food items which are available in the GHS data. NBS therefore takes interest in conducting this survey assuring the effectiveness of the work given its vast experience in undertaking large scale surveys.

This survey aims at collecting market data for non-standard measurement from all six geopolitical zones (NC, NE, NW, SS, SW, SE). The survey plans to visit approximately 12 states and 24 market places throughout the country. In each place, items with non-standard measurement, including food production items-in open market places-and consumption food items-in household, are measured in kilogram.

2. The field officers role

2.1. Enumerators

The enumerators are expected to complete the main market place and household questionnaire and using laptops/tablets. The instructions and troubleshooting tips working with computer assisted personal interview (CAPI) are given in part 4 of this manual. The way you act will affect the accuracy of the information that you collect, as well as public perception of this exercise. Be willing to listen, be patient, polite, positive and friendly. **Introduce the survey in a way that encourages the respondent:** The introduction to the interview gives the respondent an idea of what the study is all about and why they should give up their time to participate. You will also have a letter to show that you are working for NBS and its collaborators.

In general, as an enumerator, you need to:

- be patient and tactful when interviewing household members in order to win their cooperation and trust;
- ensure interviewed households and or vendors of items to be measured complete confidentiality of all collected data: If the respondent hesitates about answering the questions, or asks what the information will be used for, repeat that the information will be kept completely confidential.
- follow the instructions established during enumerators' training;
- know the content of the survey manual;
- follow the instructions given by the team supervisor;
- identify the required food items from the recognized market place and household
- identify the kind of non-standard measurements used for the identified item
- measure each item at least two times in kilogram
- take a picture for all measured items
- record the GPS address of each market places

2.2. Monitors

The Monitor will

- Contact with appropriate zonal and state level government offices and identify local potential assistance persons in each market place that can facilitate the process of identifying the intended items and the corresponding non-standard measurements.
- Keep communicating with the zonal coordinators and the data manger
- Ensure that the logistics are done appropriately to facilitate the movement of the interviewers
- In collaboration with the core survey team, training of enumerators before the survey
- Ensure the questionnaire has been filled appropriately

3. Understanding the Survey Questionnaire

The questionnaire is designed aiming to capture and measure with standard unit measurement for all production and consumption foods used in specific states and markets.

3.1.Suggested States for Market Survey

Kwara, Benue, Gombe, Bauchi, Kano, Kebbi, Enugu, Ebonyi, Delta, Rivers, Ondo and Lagos

Table 1. States and markets

LIST OF MARKETS			
S/NO	STATE	URBAN	RURAL
1	GOMBE	CENTRAL MARKET	KWA DOM MAIN MARKET
2	ONDO	OJA - OBA	OKE-IGBO
3	KWARA	OFFA MARKET	AJASE IPO
4	DELTA	OGBE OGONOGO	ISSELE- AZAGBA MARKET
5	BAUCHI	MUDA LAWAL MARKET	BAYARA
6	KANO	RIMI MARKET	BADUME
7	BENUE	MAKURDI MARKET	WANNUNE
8	EBONYI	ABAKPA	IBOKO
9	LAGOS	MILE 12	AIYETORO
10	ENUGU	ARIA	ORIRE UGWOGO
11	RIVERS	NKPOLU MILE 3	MBIAMA
12	KEBBI	BIRIN KEBBI MARKET	MIAMA

3.2.Administering the Market Survey

This survey involves three major activities

1. Identifying and measuring nonstandard units as well as completing the survey instrument.
2. Taking pictures of the measured item-units
3. Taking GPS coordinates of the market center

3.3.Survey instrument administration

This subsection gives you important information on the instruments, how to administer the questionnaire, how to deal with the market survey respondents, etc.

Before you go to a selected market, you should ensure that you are ready to start the market survey data collection. That is make sure that you have all the necessary equipment such as, CAPI notebooks, GPS phone, Weighing scales, paper questionnaires and pen. Moreover, Make sure that you have the correct location (zone, state) and Market identification code of the selected market center. You will start completing module A (cover page of the instrument) and this section will be completed by the field officer. All Questions of Module A will be completed by the field officer without asking any respondent.

You may encounter some unusual cases during the data collection. If you encounter a different or unusual case in a particular section or sections for a market and are not sure what to do, write all of the details down on the computer/questionnaire or in your notebook. Obtain as much information as possible to enable you to complete the questionnaire efficiently when you leave the market. After collecting data from the market, check this manual for guidance. If the solution cannot be found in this manual, you should consult your Field Monitor.

Your Interactions with the Local administrators and Community: As you will be working intensively for few days in the city/ town with community members in carrying out the survey, it is vital that you establish a good working relationship with local administrators as well as Vendors in the market center.

Your work is not to be secretive. Please explain what it is you are doing to all community members and local administrators who ask about your activities. You should be respectful, courteous, and patient with everyone in the locality/ market center. The quality of your work is to a large degree dependent on the level of cooperation you receive from the local administrators, members of the communities in which the market is located.

Getting support letter from regional and local administrators: You must always have a clearance letter from the state administrators and village heads. This must be done before you start to collect any data or reach to the market centers. Since the market centers are located in local government areas getting clearance will not take much time.

3.4.DESCRPTION FOR MARKET SURVEY QUESTIONNAIRE

This subsection will provide you brief description of the market survey questionnaire. The sections in the Household questionnaire are organized as follows:

- MODULE A: MARKET IDENTIFICATION
- MODULE B: ITEM UNIT MEASUREMENT
- MODULE C: OTHER ITEM UNIT MEASUREMENT

General Notes: There are two groups of items in this questionnaire. One is for container units and the second group is non container nonstandard units. The weight and price of container units will be collected from each market and from two vendors in each market. Non Container unit will be collected once in each zone. Please also note the following points during the data collection:

- If some of the non-containers are not available in the market please create the units yourself. For example if you cannot find three sizes of sweet potato *heap*. That is if only one *heap* is available in the market, please create the other two and make them big medium and small *heaps*. That is, the market *heap* will be small heap and twice of the market heap will be medium and three times of the market heap will be large.
- For all items will be collected from each market and from two vendors.
- In the market you might find a variety of sizes of containers. For instance you might find 10 different sizes of sack. In such cases please use the container that is commonly used by the farmers or by the local community. You might purchase these containers and ask the vendor to give you item filled in with similar size of containers.

Module A: Market Identification: this section mainly aimed to collect information about the location of the market, staff detail and interview details. This section is mainly completed by the field officer without asking any respondent. Both are identification and names of field staffs are coded in the CAPI and field officers are supposed to complete this section before they have started any market data collection.

Q0 Market Identification number: each market will have a unique identifier to be assigned by your field monitors so please enter/record market id in the space provide

Q1-Q3. These questions are mainly focused on area identification of the market survey. Enter/record the name and the area code of the zone/state/LGA of the selected market center. These codes are also preceded in the CAPI and select the correct code from the option lists

Q4-Q5 Staff details: In this part of the questionnaire, spaces are provided for the field officers and field monitors involved in this field work activities. Names of all field staffs are pre-coded in the CAPI.

Q6-7 date and time of interview: there is a space provide for date and time of interview in the CAPI. However this section will be automatically filled in by the CAPI from the machine time and date. Hence please make sure that the date and time of your machine is properly working. Please also remember that this question is protected and don't try to change and modify these questions

Q8 - 9. GPS Coordinates: Record the GPS coordinates (latitude and longitude) of the selected market center. GPS coordinates will be taken form the center of the market not from corners of the market. Please also refer to the section that explains on how to use GPS devices.

Module B: Item Unit Measurement

Q1-Q2 ITEM CODE AND ITEM NAME: Both item code and item name are pre filled in or prepopulated in the CAPI and there is no need to record codes and names for these questions

Q3 UNIT NAME: All local unit names for each item type is also prefilled in or prepopulated in the CAPI and there is no need to record names for this question

Q4 SIZE: All the size options for the nonstandard units are also prefilled in the CAPI and there is no need to be completed by the field officer.

Q5 WAS ITEM MEASURED? Record if the item local unit combination is measured. If the item is measured record Yes (1) if the item is not recorded Record No (2)

Q6 Why was item not measured?: If the answer for Q5 is no record the reason why the item is not measured in the space provided and skip to the next item

Q7a and Q8a Item Sample Weight #1 and Item Sample Weight #2: if the answer for Q5 is yes record the weighing result of each item in the space provided. Each item will be measured twice and the first result is recorded in Q7a and second result is recorded in Q8a. Please see the measuring procedures and instruction below

Q7b and Q8b Price for Item Sample Weight #1 and Price for Item Sample Weight #2: if the answer for Q5 is yes record the price for the measured item in the space provided. The price of each item measured will be recorded twice from two different vendors. Price from vendor 1 will be recorded in Q7b and price from vendor 2 will be recorded in Q8b.

NOTE: Please note that for each item and unit combination two weights will be taken from two different vendors. Therefore weight 1 (weight from Vendor 1) and price of weight 1 (price from Vendor 1) will be recorded in Q7a and 7b respectively. Weight 2 (weight from Vendor 2) and price of weight 2 (price from Vendor 2) will be recorded in Q8a and 8b respectively

Q9: Which type of scale was used? : Record the type of scale used to measure each listed items in the space provided

MODULE C: OTHER ITEM UNIT MEASUREMENT

Module C (Other item unit measurement) is only to collect nonstandard unit that are not listed in Module B. When we go to the market we could find some local units that are common to measure the list of items in Module B. These new local units/ nonstandard units must be listed in module C. In module B the item name, item code, unit name and size was prefilled but for this module the item name, unit name and size must be completed by the field officer.

Q1 ITEM NAME: Both item code and item name are to be selected from the options provided. The item names and codes are not prefilled and must be completed by the field officer.

Q2 UNIT NAME: Please complete the nonstandard unit that you have found in the market but not in the list.

Q3. SIZE: if the local unit has different sizes please select the different size from the option provided. For example if the local unit has Large, medium, and small sizes you have to select the item three times to be measured using these different sizes.

Q4 WAS ITEM MEASURED? This will not be asked for this module. The field is protected and will be skipped to the weight

Q5 WHY WAS ITEM NOT MEASURED? This will not be asked for this module. The field is protected and will be skipped to the weight

Q6a and Q7a Item Sample Weight #1 and Item Sample Weight #2: record the weighing result of each item in the space provided. Each item will be measured twice and the first result is recorded in Q6a and second result is recorded in Q 7a. Please see the measuring procedures and instruction below

Q6b and Q7b Price for Item Sample Weight #1 and Price for Item Sample Weight #2: record the price for the measured item in the space provided. The price of each item measured will be recorded twice from two different vendors. Price from vendor 1 will be recorded in Q6b and price from vendor 2 will be recorded in Q7b.

NOTE: Please note that for each item and unit combination two weights will be taken from two different vendors. Therefore weight 1 (weight from Vendor 1) and price of weight 1 (price from Vendor 1) will be recorded in Q6a and Q6b respectively. Weight 2 (weight from Vendor 2) and price of weight 2 (price from Vendor 2) will be recorded in Q7a and 7b respectively

Q8: Which type of scale was used? : Record the type of scale used to measure each listed items in the space provided

Selecting Items to Weigh:

The two measurements of a given item should be collected from two different vendors. When selecting an item/unit combination to measure in the markets, confirm with the seller that the unit is consistent with your identification.

The order of items listed on the questionnaire does not have to be followed. You may skip around as necessary to complete the market questionnaire most efficiently. **If there are any common units you notice are missing from the list, please take the measurement and add the item-unit to Module C.**

Availability:

When an item is available at a market, you should try to collect as many of the listed unit measurements as possible. **Even if an item-unit combination is not for sale at the market, it should still be weighted.** All item/unit combinations may not be available in the market.

Weighing Items & Scale Operation:

The digital scales used for the market survey are ADAM (LBK SERIES). These are accurate but are not ideal for rough conditions. Great care must be taken when applying them in the field. Keep scales clean and dry.

All weights taken will be recorded in kg.

Note: the maximum weight on the scales is 30 kg. If you suspect the item to exceed this limit break the load into two or more batches and record the sum of the measurements. If a large scale is available for use in the market, you may use this for larger units (fees for use of scale will be provided when necessary). When using the market scales, ensure the scale is calibrated correctly by checking the balance is at “0” with nothing on it. If more than one scale is available, select a scale that has a government certification stamp.

1. Place the scale on a stable flat surface. The scale must be as level as possible before weighing items.
2. Press [O / I] to turn the scale on. The Scale will run a brief check and once the scale is stable, the display will show “0.000Kg”.

Note: If the display does not show the weighing unit as Kg then the scale was not configured correctly for the last item/s weighed. Press [UNITS] to select the correct unit (KG) to be used and reweigh previous item if necessary.

Note: Some items may require the use of a container to hold the item on the scale. When a container is used, place the empty container on the scale and wait for a stable reading. Once a stable reading is displayed press [T] button and the display will read “0.000Kg”.

3. Add items to scale, wait for stable reading and record weight displayed.

Unit Photos

In addition to collecting conversion factors, photos will also be taken of each unit. These photos will serve two purposes: (1) to provide data users with a more accurate perception of what the NSUs actually are (e.g. a basket, cup) and their relative size, and (2) be used in future waves of the GHS to aid in respondents’ estimation of quantities in NSUs. In the latter case, the photos will be particularly useful in standardizing units such as a “bunch” or “heap” that are not clearly defined.

Required photos:

Photos are required for every item/unit combination that is measured. Since the photos will be linked to specific measurements, this means we need a photos for each measurement (in every market, for both vendors). However, the different sizes of an item unit can be photographed together. For example the small, medium and large mudu of millet can be in a single photograph.

General guidelines for taking photos:

- Photos should be well lit so that the items can be easily seen and you can differentiate between the item and its shadow or background.
- For photos of containers that are commonly used to measure a large number of items, the containers could be photographed empty or filled with one of the items it is used to measure.
- For all photos, the weighed quantity should be photographed. For example, the potatoes used to weigh a heap should be the exact same potatoes photographed for the heap.
- Each photo should contain only one food item or unit.
- A size reference item must be in the picture to illustrate the relative size of the main objects. This should be something that generally comes in one standard size and is easily identifiable to respondents. Example small Eva bottle water (75 CL).
- The dimension or volume of the item must be clear. Usually this means taking the picture from a side angle, either directly horizontal to the item, or slightly above horizontal. With single items (one tomato, but not a heap of tomatoes) aerial photos (taken from directly above a container, for example) may be fine. Aerial photos of containers or items that are in a heap are generally not useful.

(Please see the sample pictures from Ethiopia for Reference)





Filing and Naming of photo

Only a single photo will be taken for consumption items that are measure using non containers like heap, pieces, bunch, etc. We must take a photo for every container or local units such as sack, mudu, tiya, etc .

The entire photo taken from the market must be filed and named consistently through the survey. The following is the procedure you must follow to file and name the photo taken from each market:

1. For all markets we must have one photo folder. This folder must be named by the name of the market. For example if the market is Gombe central market the folder must be named as “1501 - Gombe”
2. Each market folder must have two sub folders and must be named as market name and vendor number. For example for KARU market we must have two folders Named “Vendor 1” and “Vendor 2”
3. All the Market folders and subfolders must be created before they go to the market (even before they go to the field).
4. After the folders and subfolders are created all the photos taken from each market must be kept in each subfolder. The photo names must also be consistent throughout the survey. The file name must include market name, item name, local unit, size and vendor number. For example if you have measured and taken a photo from *Gombe central* market and the item is *millet* in *small mudu* from the *first vendor* then the photo name must be “1501 millet mudu small v1” and the same filing procedure will be made to other items. However, if the photo for all sizes is in one photo then the file name must be “1501 millet mudu v1”
5. The photo for all sizes should be taken together if possible. That is a single photo containing large, medium and small size local units. In some case it could be difficult to find all sizes in one vendor. In such situation

you can take different photo for different sizes of the same local/ nonstandard units. But you must indicate the size of the unit in the file name.

6. Please also note that you must take the photo for all items with the items filled in the container. Moreover, you must take one sample empty containers for all sizes in each market.

4. Use of tablets and troubleshooting

GENERAL NOTE

1. Make sure that you have the following equipments for the survey.
 - ✓ **Note or tablets** – Two per team with the following:
 - bag
 - External GPS unit
 - ✓ **USB Internet Routers (or Dongles)** for all Monitors- these are available
 - ✓ **Field bags** – for field officers/monitors to carry their field equipment
 - ✓ **Manuals** – All survey Related Manuals
2. Before you start your interview, make sure that the device you are using:
 - ✓ Properly functioning with batteries. Batteries are fully charged.
 - ✓ Has correct settings (such as time, date and partitions, etc.).
 - ✓ The CAPI instrument has been loaded with all of the right software (such as CSPro software's, etc.).
 - ✓ USB dongles for internet are working properly.

NOTE:

1. Every night batteries should be charged.
2. Keep the CAPI Device away from heat.