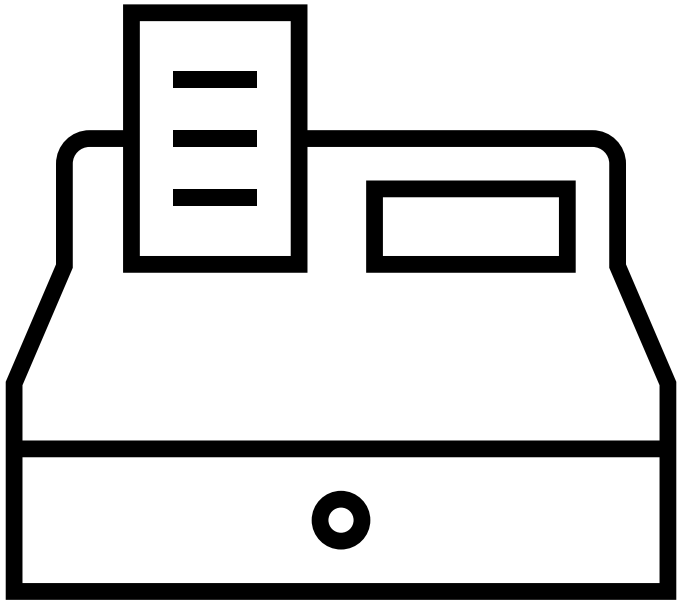
Ethiopia Poverty Measurement Training

Day 3: Food Consumption

Food Consumption

- All food consumed during the reference period should be included:
  - Food purchased from outside of the home
    - From market
    - Meal away from home
  - Food produced by the household.
  - Food received in-kind, transfer, gift

Alcohol and Tabacco will be included, but not in “food consumption”



Food Value for “IN-CASH”

- If total expenditure is given, just annualize (after adjusting for possible errors / outliers)
- If data on last purchase is given separately (LSMS style), use this to value quantity consumed from consumption
  - value_consumed = quantity_consumed x cost_purchased / quantity_purchased
- If no recent purchase recorded, or units don’t match, will value as for own production

Value for Food from “IN-KIND”

- 1. Use either respondent-estimated valuations
  - Available in the data
  - But it is a hypothetic question the hh might struggle to answer accurately
- 2. unit values from other household’s food purchases
  - based on actual market transactions
  - the cost of which other households buy a similar item may not be the cost at which this household could have sold the item
- 3. the market price data from external sources such as the CPI, price surveys
  - Set of prices for valuing food should be coherent with those use for price indices and for construction of poverty line
  - May not find the price for all the item

Aggregating Unit Values

- Want to construct market prices (p^h) for which a household could sell their own produce instead of consuming it
- General practice:
  - take unit values for nearby households that purchased the item
  - take median or mean price over smallest administrative unit (down to PSU) for which there is data
  - consider observations which are close in time as well as space?
  - or use CPI to adjust unit values before aggregating
- Consider minimum number of observations over which to take median
  - will reduce geographic specificity of price but also reduce noise
- Look at overall distribution of unit values to assess validity

Aggregating Unit Values - Units

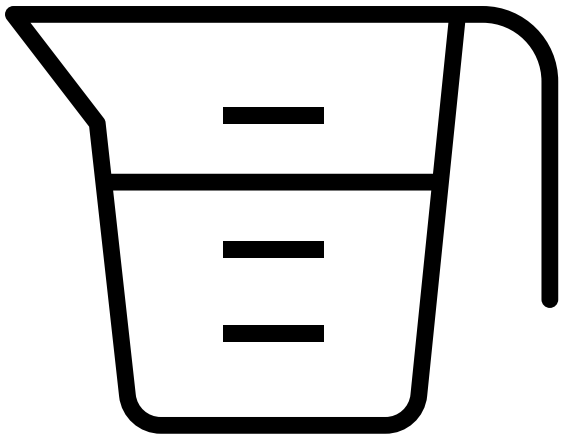
- Treat unit values for different units separately

- Have price of a cup of rice, and price of a basin of rice and price of a kg of rice independently
- Best if:
  - only a few units are used
  - plenty of observations
  - want to capture different prices based on units (buying rice by cup vs. buying by 50 kg bag)
- May need to use if don't have accurate conversion factors
- Still need everyone to mean the same thing by the different nonstandard units

CONVERT ALL UNITS INTO STANDARD UNIT AND COMBINE

- Have one unit value per kg of rice
- Best if:
  - reliable conversion factors exist
  - not worried about different prices based on quantity bought
- Allows you to have quantities in kg and thus calories for each food item for each household

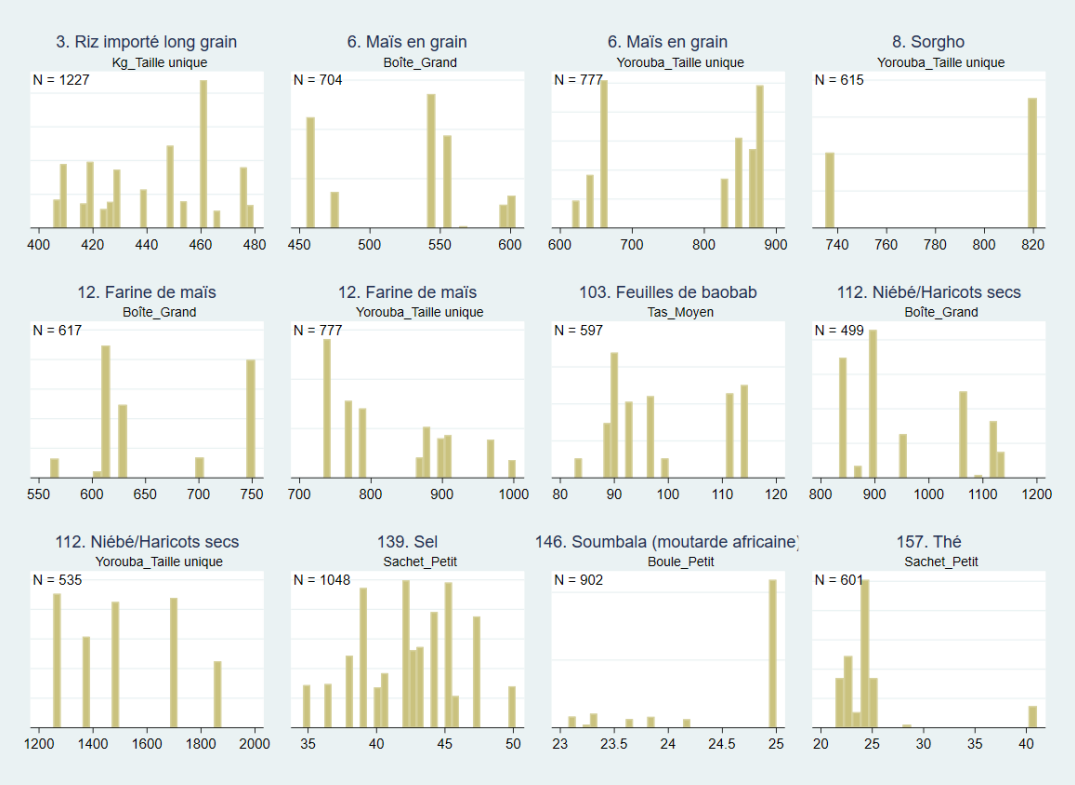
Know what your non-standard units are!

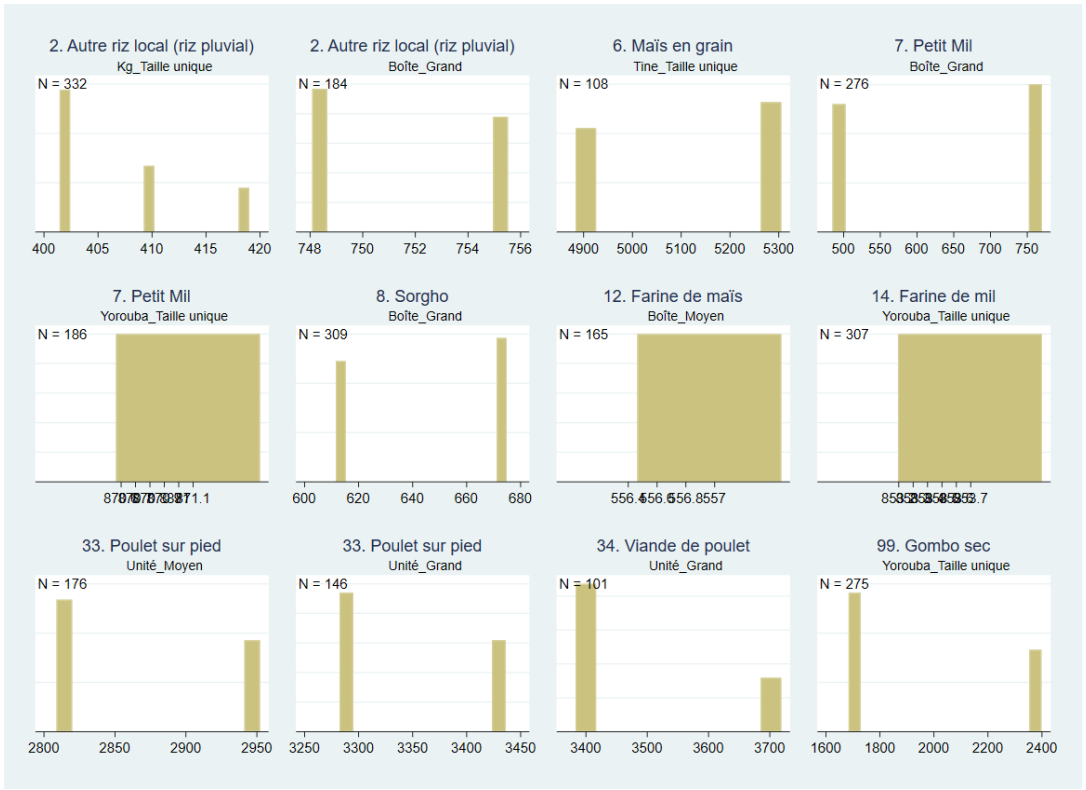


Aggregating Unit Values - Process

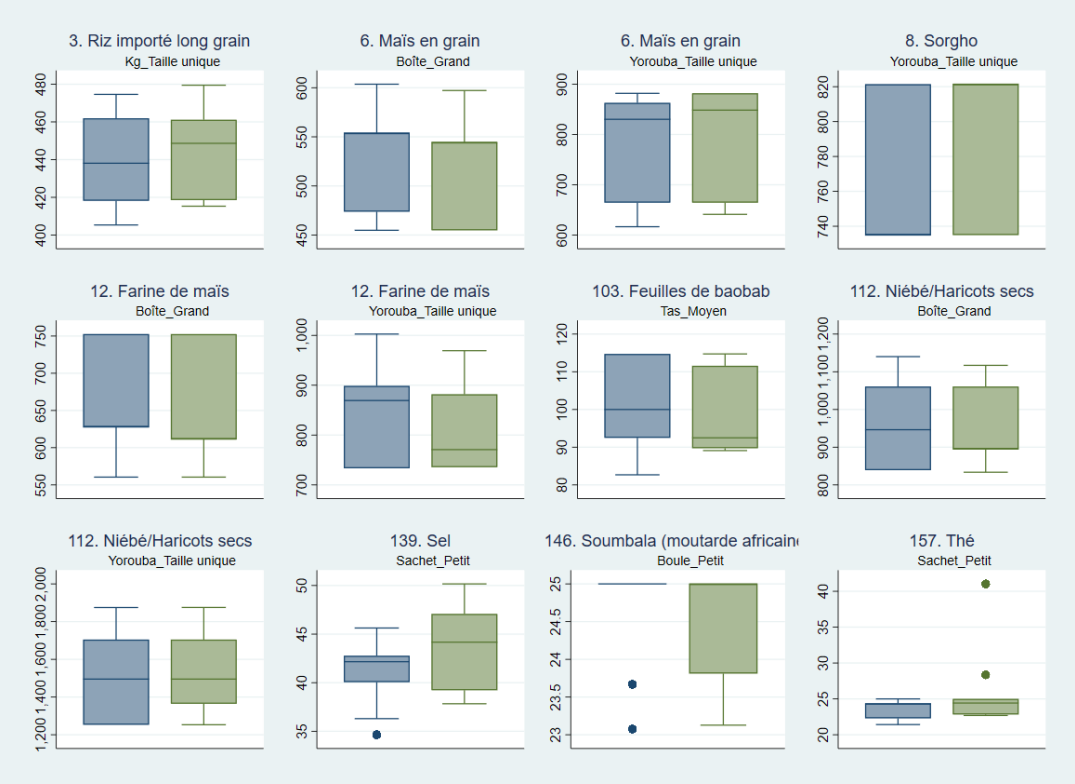
- [Optional] Use conversion factors to get quantities in kg/L
- For each recorded purchase, divide cost by quantity to get unit value
- [Optional] Apply CPI to adjust for differences over time
- Construct median unit value over different geographical levels [and units] [and time periods]
- Merge these median unit values together, and take as local price the median at the lowest geographical level with the minimum number of observations

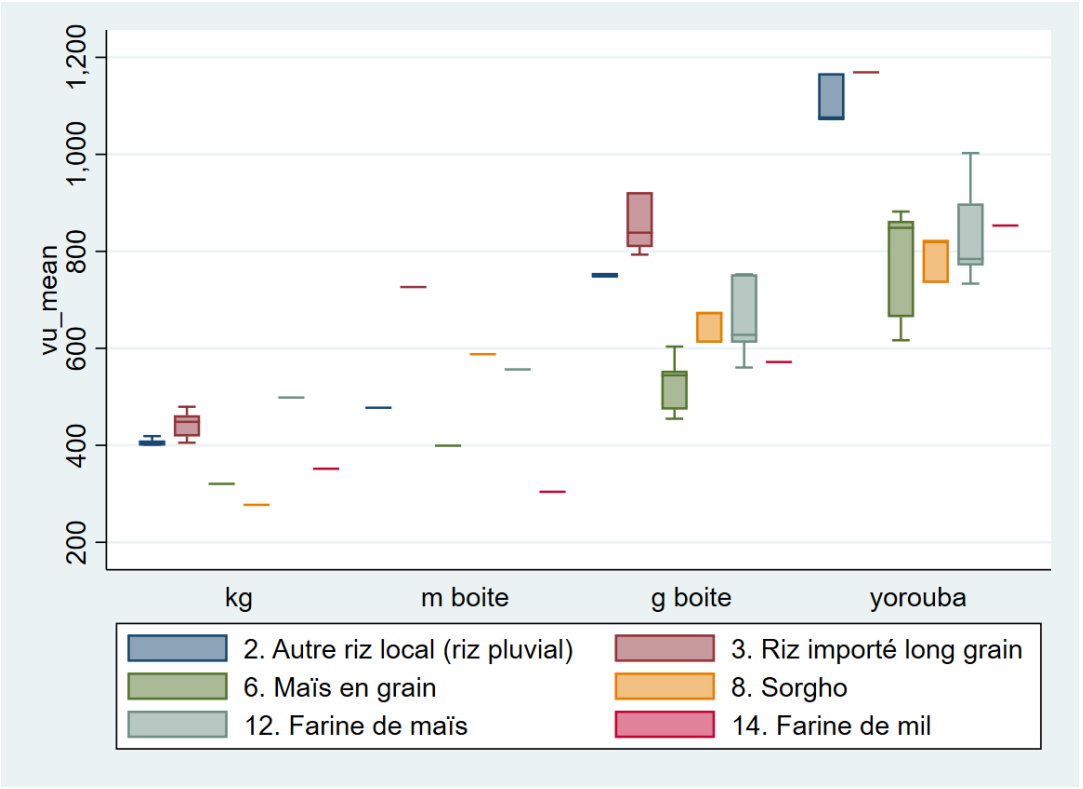
Graphs to Inspect Prices





More graphs


3. Riz importé long grain
Kg_Taille unique
6. Maïs en grain
Boîte_Grand
6. Maïs en grain
Yorouba_Taille unique
8. Sorgho
Yorouba_Taille unique
12. Farine de maïs
Boîte_Grand
12. Farine de maïs
Yorouba_Taille unique
103. Feuilles de baobab
Tas_Moyen
112. Niébé/Haricots secs
Boîte_Grand
112. Niébé/Haricots secs
Yorouba_Taille unique
139. Sel
Sachet_Petit
146. Soumbala (moutarde africain
Boule_Petit
157. Thé
Sachet_Petit


vu_mean
200
400
600
800
1,000
1,200
kg
m boite
g boite
yorouba
2. Autre riz local (riz pluvial)
3. Riz importé long grain
6. Maïs en grain
8. Sorgho
12. Farine de maïs
14. Farine de mil

Yet More Graphs

Robust Data Processing

- Flag invalid quantities (quantity-unit combinations) and consider them as missing
- Flag outlier unit values and do not include them in the aggregation
- Inspect distribution of constructed local prices, and make sure it is reasonable, especially for the most important home-produced foods
- Look for upper outliers in the value of consumption of each food item, assuming **value per capita** is log-normally distributed
- Look for lower outliers in total expenditure using a simple lower floor like for nonfood items
- Winsorize upper outliers
- Impute missing / invalid values using the median

NIHS 2024

Questionnaire

FIRST VISIT
(3 days recall)

HCE-FORM 2A

FORM 2A: CONSUMPTION OF FOOD, BEVERAGES AND TOBACCO OVER PAST 3 DAYS (CODES 00001 - 02698)

201	202	203	204	205	206		207	208		209	210
Line No	FOOD, BEVERAGES, TOBACCO, Chat and preparation		EXPENDITURE		UNIT		QUANTITY	VALUE IN		Price used	Visit
	COMODITY TYPE	CODE	TYPE	SOURCE	NAME	CODE		BIRR	Cents		
01											1
02											1
03											1
04											1
05											1

SECOND VISIT
(4 days recall)

FORM 2B

FORM 2B: CONSUMPTION OF FOOD,BEVERAGES AND TOBACCO OVER PAST 4 DAYS (00001-02698)

201	202	203	204	205	206		207	208		209	210
Line No	FOOD, BEVERAGES, TOBACCO, Khat and preparation		EXPENDITURE		UNIT		QUANTITY	VALUE IN		Price used	Visit
	COMODITY TYPE	CODE	TYPE	SOURCE	NAME	CODE		BIRR	C		
01											2
02											2
03											2
04											2
05											2
06											2

Distinguish the items in the module 2

Category	MARJOR	Category	MARJOR
Cereals ¨Whole	0	Spices (including Pepper)	14
Cereals Flour	1	Potatoes, other Tubers and Stems	15
Pulses Whole cotted	2	Coffee, Tea, Chat and Buck-thorn leaves	16
Pulses Flour	3	Other Food Items (Salt, sugar, honey, etc.)	17
Pulses Split	4	Breakfast Meals	18
Oil seed whole or flour	5	Lunch/Dinner Meal Staff Type	19
Pasta	6	Hot drinks	20
Bread and other prepared food	7	Juice and yoghurt in	21
Meat	8	Non-Alcoholic Beverages	22
Fish	9	Alcoholic drinks	23
Milk, Cheese & Egg	10	Service Charge	24
Oils and Fats	11	Cigarettes	25
Vegetables	12	Tobacco	26
Fruits	13		

NIHS 2024 questionnaire - UNIT

FOR ALL FORMS MEASURING UNIT CODES			
01	Gram (G)	23	Words
02	Centemeter (CM)	24	Year
03	Cubic Centemeter (CC)	25	Page
04	Number (No)	26	Minute
05	Meter (M)	27	Meal
06	Pair	28	Day
07	Box	29	"Likakit"
08	Visit	30	Frequency
09	Tablet	31	Cup/glass (Cofee, Tea, Milk
10	Capsul	32	Liter (L)
11	Roll	33	Meter Squared (M^2)
12	Pack	34	Set (Complete set)
13	Month	35	Term
14	Tuba'	36	Semister
15	Tit'	37	Credit Hour (CH)
16	Araba'	38	Meter Cube (M^3)
17	Trip	39	Small Glass
18	Ticket	40	Tube
19	kilowatt hour (KWH)	41	Cup of Maica /plastic
20	Killogram (Kg)	42	Sini' (small cup of coffee)
21	Service	43	Dose (prescriped)

Source of Acquisition

SOURCE	code
Consumptio/Use of own Hh Non- Agricultural Enterprise Good &	21
Remittance from Local Households and Persons	68
Consumption of Own Agricultural Production	11
Gifts (Wedding & other sources)	75
Salary/Wage, Bonus, Ovetime, Allowance	31
Consumptionof use of donation items from Gov't	62
Consumptionof use of donation items from NGO's	65
Free collection from forest/sea (for sale)	81
Other Source	98
Imputed Value of Dwelling Units (Own, Subdized)	44
Loans for Hh consumption & Repaiments of Loans Made	52
PSNP Direct support	77
PSNP social Work	76
Alms, Begging	71
Convenance/Inheritance	55
Prostitution Activities	72

NIHS 2024 questionnaire - FAFH

Out-Home Prepared Consumption of Food Staff and Expenditure	018-019	ከቤት ውጭ የተዘጋጁ ምግቦች ፍጆታና ወጪዎች
Breakfast Meals (Meal in No.)	018	የቁርስ ምግቦች (ምግብ በቁጥር)
Scrambled eggs	01801	እንቁላል ፍርፍር
Scrambled egg with meat	01802	እንቁላል ፍ
Egg sils ´	01803	እንቁላል ስ
Egg Sandwitch	01804	እንቁላል ሳ
Meat Sandwitch	01805	ሥጋ ሳንድ
Vegetable Sandwitch or bread with vegetables	01806	አትክልት ሶ በዳቦ
Burger /Club sandwitch	01807	በርገር/ ክለ
Ful (horse beans sauce)	01808	ፉል

Lunch/Dinner Meal Staff Type (meal in Na)	019	የምሳ/ራት ማዕድ ዓይነት (ምግብ በቁጥር)
´Key wot´, mutton/ goat	01901	ቀይ ወጥ፣ የበግ /ፍየል
´Key wot´, beaf	01902	ቀይ ወጥ፣ የበሬ
Chicken ´wot´	01903	የዶሮ ወጥ
´Key wot´ camel	01904	ቀይ ወጥ፣ የግመል
Minchet Abish´	01905	ምንቸት አብሽ
´Doro fanta´	01906	ዶሮ ፋንታ
Secondo misto	01907	ሰኮንዶ ሚስቶ
Mahberawi ,Agelgle, Kornis, Fresh, Obama	01908	ማህበራዊ፣ አገልግል፣ኮርኒስ፣ ፍረሽ፣ አባማ
Potato wot	01909	ድንች ወጥ
Cabbage wot-fasting	01910	ጎመን ወጥ የያም

Experience from NIHS 2021

The data is at hhid-FID-itemc-TYPE-SOURCE-MEASURMENT level

- **FID**: Form ID (Form 2A and 2B)
  - FORM 2A: CONSUMPTION OF FOOD, BEVERAGES AND TOBACCO OVER PAST 3 DAYS (CODES 00001 - 02698)
  - FORM 2B: CONSUMPTION OF FOOD, BEVERAGES, AND TOBACCO OVER PAST 4 Days (CODES 00001 - 02698)
- **itemc**: 5-digit item code
- **TYPE**: in-cash/in-kind
- **SOURCE**: EXPENDITURE SOURCES
- **MEASUREMENT**: grams/kg/cubic centimeters/pieces

It also pre-distinguishes the major type for us:

- In cash/in kind
- food/nonfood

Extra information:

- Conversion factor

Suggestion steps for NIHS 2021

1

Step 1. Clean data

- Check duplicates, missing

2

Step 2. Validate the data

- Double-check if the data is legitimate

3

Step 3. Compute the unit price

- It will be used to calculate the value for “in-kind” items

4

Step 4. Recategorize the consumption

- In the major group/ COICOP system

5

Step 5. final aggregation

- Regular food consumiton, FAFH