Ethiopia Poverty Measurement Training

Day 2: ETH 2021 Poverty Measurement Methodology recap

Survey Background

- HoWStat 2021 conducted by the Ethiopian Statistical Service (ESS), formerly CSA

- Integrated HCES and WMS into one comprehensive survey

- Full-year data collection (Jan–Dec 2021) across 45 domains

- Stratified by region and urban/rural category; 38,828 households

- **Tigray** region was excluded due to conflict

- Two-stage stratified sampling ensures national representativeness

Methodological Choice: Replication vs. Redesign

- Options:
  1. Develop new poverty line from 2021 data
  2. Replicate 2016 methodology for consistency
- 2021 deemed atypical year due to:
  - Conflict and partial geographic coverage
  - Decline in caloric intake and rise in calorie-based poverty
- Decision: replicate 2016 method for temporal comparability
- New poverty line planned for 2024/25 survey with full coverage

Consumption Aggregate – Conceptual Framework

- Consumption used as welfare proxy due to volatility of income
- Aggregate constructed from 4 components:
  1. Food
  2. Non-food nondurables
  3. Durables
  4. Housing
- Adjustments made for:
  - Temporal price changes
  - Spatial price differences
  - Household size and composition (adult equivalents)

Food Consumption Valuation

- Sources: purchases, own production, in-kind, food away from home
- 669 food and beverage items, 11 alcohol/tobacco items (excluded)
- School meals estimated by ESS from MoE data
- Valuation hierarchy:
  - Household-reported price
  - Local market survey price (if missing)
- Aggregated to monthly values (standardized to Dec 2021)

Non-Food Nondurables

- Includes clothing, hygiene, energy, communication, personal care
- Excludes lumpy/one-off purchases in theory—but 2021 includes them for comparability
- Education and health included (as in 2016)
- Some adjustments: transport allowances excluded for comparability
- Annualization of short-recall items based on recall period

Durables Component

- Ideally should use 'service flow' approach per best practices

- 2016 lacked asset details → use purchase value method for comparability

- Durable items identified through crosswalk between asset and expenditure modules

- Includes: furniture, appliances, electronics, vehicles

- Excludes: farm implements, jewelry, business assets2

Housing and Imputed Rent

- Renters: actual rent used
- Owners: asked to self-assess monthly rent equivalent
- Kebele rent adjusted using admin data in Addis Ababa
- No hedonic regression due to weak rental market in rural areas
- Method mirrors 2016 for comparability

Spatial Price Adjustment

- Price levels vary by region → apply spatial deflators

- 2021 Laspeyres index used for food and non-food items

- Constructed using regional average prices and 2011 budget shares

- Preferred over 2016 deflators for closer alignment with non-monetary indicators

- Spearman correlation used to validate ranking consistency

Temporal Price Adjustment

- High inflation during 2021 (27% overall, 31% food)

- Used official national CPI (food and non-food) with Dec 2021 as reference

- Tigray data excluded from CPI computation due to unreliability

- Alternative CPI from survey prices also constructed → found consistent

- Necessary for adjusting within-year price fluctuations

Poverty Line Construction (CBN Method)

- Based on Cost of Basic Needs method
- Two approaches:
  1. Inflate 2015 line with CPI to Dec 2021
  2. Re-cost 1996 food basket using 2021 prices, adjust for non-food
- Food poverty line = cost of 2,200 kcal food basket
- Total line = food PL / food share of poorest 25%
- Approach consistent with MoFED and World Bank practices

Survey comparison

Aspecta	ETH 2021 Approach	Standard Practice
Data Context	Atypical year (conflict, high inflation, partial coverage)	Typically representative and stable conditions
Durable Goods	Valued using **full purchase price**	Prefer **user cost / service flow** method
Housing Valuation	Based on **self-assessed rent** for non-renters	Prefer **hedonic model** if rental market allows
Price Deflators	Spatial: Laspeyres index using 2021 prices Temporal: Official CPI (excludes Tigray)	Often joint spatio-temporal Paasche indices or price surveys
Non-food Items	Includes lumpy/atypical expenditures for consistency with 2016	Typically excluded to reflect regular consumption only

Survey comparison

	ETH 2021 Approach	Standard Practice
Poverty Line Update	CPI-inflated 2015 line & re-costed 1996 basket	Often new basket defined from current reference population
Food consumption	The HoWStat 2021 survey asks households to report the quantity of each food item consumed during the reference period then the monetary value of these quantities is estimated using local market prices – reported by households first or from prices from the market survey module when households do not report a price - forming the basis of the food consumption aggregate	Calculate the unit price from the survey, then combine with the quantity for the items are not form the purchased (no value amount)
School Meals	Estimated using MoE data, not reported by households	Not commonly integrated unless directly collected