



Federal Republic Of Somalia Somalia National Bureau Of Statistics

Modernizing Somalia's Statistical Infrastructure: The CPI Reform Initiative

Strategic Context

The modernization of Somalia's Consumer Price Index represents a cornerstone of our broader statistical infrastructure development strategy. This initiative directly addresses the critical need for robust macroeconomic indicators to support evidence-based policy formulation and facilitate Somalia's continued integration into the global economy.

Technical Innovations and Methodological Advancements

Comprehensive Data Foundation

The project has established a new empirical foundation for CPI calculations based on the 2022 Somalia Integrated Household Budget Survey (SIHBS). This extensive survey captured consumption patterns across 7,212 households from 601 enumeration areas, with stratified sampling across urban, rural, and nomadic populations—achieving a remarkable 96% response rate.

Methodological Sophistication

Our technical approach incorporates several advanced elements:

Dual Consumption Concepts: We have calculated weights based on both Household Final Monetary Consumption Expenditure (HFMCE) and a modified Household Final Consumption Expenditure (HFCE) concept that includes imputed rentals, offering analytical flexibility.

Rigorous Outlier Detection and Treatment: We implemented sophisticated outlier identification protocols examining unit price distributions at regional levels, applying targeted imputation methodologies rather than eliminating observations.

Temporal Adjustment Techniques: The team developed specialized approaches to annualize expenditure data collected using various recall periods (7-day, monthly, 6-month, and 12-month), ensuring temporal consistency despite the single-quarter data collection window.

Advanced Classification Implementation: We have successfully mapped all consumption items to the latest COICOP 2018 classification, establishing a nine-digit hierarchical structure that supports detailed analysis while maintaining international comparability.

Multi-level Aggregation Framework

We've designed a sophisticated three-stage aggregation methodology:

Elementary Aggregate Calculation: Employing unweighted geometric means (Jevons formula) at the product level

Horizontal State-Level Aggregation: Using population-weighted arithmetic means for territorial consolidation

Vertical Aggregation: Implementing Laspeyres-type formulas with expenditure weights to derive higher-level indices

This architecture enables both national-level analysis and granular regional comparisons.

Structural Findings: Somalia's Consumption Landscape

The recalibrated weights reveal significant insights into Somalia's economic structure:

National Consumption Patterns

- Food and non-alcoholic beverages constitute 45.0% of consumption, demonstrating continued predominance but showing a modest 1.6 percentage point decrease from previous measurements.
- Housing, water, electricity, gas, and other fuels represent 18.1% of expenditure.
- Transport and clothing/footwear each constitute 8.3% of household spending.

CPI - ANNUAL %-CHG

			2022	2023
COICOP 2018	Aggregate Level		J	F
CPI	TOTAL	CPI	4.55%	3.02%
1	CPI	01 - FOOD AND NON-ALCOHOLIC BEVERAGES	3.24%	2.23%
2	CPI	02 - ALCOHOLIC BEVERAGES, TOBACCO AND NARCOTICS	4.59%	7.56%
3	CPI	03 - CLOTHING AND FOOTWEAR	6.81%	6.23%
4	CPI	04 - HOUSING, WATER, ELECTRICITY, GAS AND OTHER FUELS	1.45%	1.52%
5	CPI	05 - FURNISHINGS, HOUSEHOLD EQUIPMENT AND ROUTINE HOUSEHOLD MAINTENANCE	1.14%	2.59%
6	CPI	06 - HEALTH	12.65%	10.64%
7	CPI	07 - TRANSPORT	13.40%	9.19%
8	CPI	08 - INFORMATION AND COMMUNICATION	-5.90%	-7.39%
9	CPI	09 - RECREATION, SPORT AND CULTURE	1.83%	-0.88%
10	CPI	10 - EDUCATION SERVICES	27.11%	1.89%
11	CPI	11 - RESTAURANTS AND ACCOMMODATION SERVICES	7.42%	5.79%
12	CPI	12 - INSURANCE AND FINANCIAL SERVICES	1.90%	2.08%
13	CPI	13 - PERSONAL CARE, SOCIAL PROTECTION AND MISCELLANEOUS GOODS AND SERVICES	7.74%	4.50%

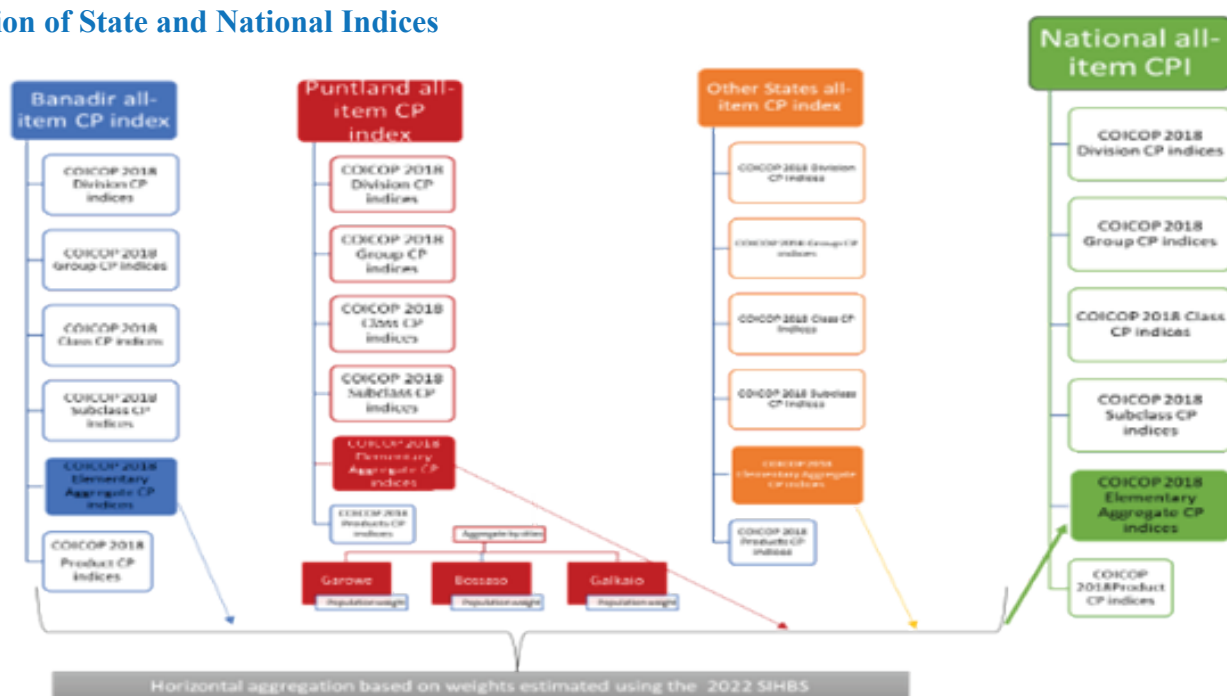
Regional Economic Divergence

Our analysis reveals substantial regional heterogeneity:

- Food expenditure exceeds 50% in Galmudug, Jubaland, and Southwest regions, but falls to 41.0% in Banadir.
- Housing costs range from 22.9% in Banadir to 13.0% in Southwest.
- Transport expenditure varies from 11.2% in Puntland to 4.9% in Jubaland.

These variations highlight the critical importance of our new disaggregated approach.

Calculation of State and National Indices



Implementation Roadmap

- The project is progressing through a structured implementation sequence:
- **Immediate Term (Q2-Q3 2025)**
- Basket harmonization across Federal Member States.
- Extension of collection infrastructure to secondary urban centers
- CAPI implementation in remaining regions (Puntland, Somaliland)
- **Medium Term (Q4 2025-Q2 2026)**
- Development of quality assurance frameworks
- Implementation of advanced imputation methodologies
- Establishment of regular review mechanisms
- **Longer Term Innovations (2026-2027)**
- Integration of alternative data sources (web-scraped data)
- Development of specialized indices (core inflation, regional comparisons)
- Enhanced dissemination technologies.



Strategic Benefits

This initiative delivers several strategic advantages:

- **Policy Impact**
- **Enhanced monetary policy precision through improved inflation measurement**
- **Strengthened fiscal planning via better understanding of regional economic conditions**
- **More accurate poverty measurement and social program targeting**
- **International Integration**
- **Alignment with international statistical standards**
- **Improved comparability with regional and global economic metrics**
- **Enhanced credibility with international financial institutions**
- **Institutional Development**
- **Strengthened technical capacity across all Federal Member States**
- **Improved coordination between central and regional statistical offices**
- **Development of sustainable data systems and analytical capabilities**

Technical Partners

This initiative represents a collaborative effort among:

- **Somalia National Bureau of Statistics**
 - **Federal Member States' Statistical Offices**
 - **World Bank Group**
 - **International Monetary Fund**
 - **International Development Association**
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