Afghanistan, Burkina Faso, Burundi...and 22 more - Monthly food price inflation estimates by country

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Identification

SURVEY ID NUMBER
WLD_2021_RTFP-CTRY_v02_M

TITLE
Monthly food price inflation estimates by country

SUBTITLE
25 countries, 2008/01/01-2022/05/01, version 2022/05/25

COUNTRY/ECONOMY

Name	Country code
Afghanistan	AFG
Burkina Faso	BFA
Burundi	BDI
Cameroon	CMR
Central African Republic	CAF
Chad	TCD
Congo, Dem. Rep.	COD
Congo, Rep.	COG
Gambia, The	GMB
Guinea-Bissau	GNB
Haiti	HTI
Iraq	IRQ
Lao PDR	LAO
Lebanon	LBN
Liberia	LBR
Mali	MLI
Mozambique	MOZ
Myanmar	MMR
Niger	NER
Nigeria	NGA
Somalia	SOM
South Sudan	SSD
Sudan	SDN
Syrian Arab Republic	SYR
Yemen, Rep.	YEM

STUDY TYPE
Monthly food price estimates in fragile countries

SERIES INFORMATION
This dataset is part of a series of frequently-updated data files providing monthly food prices and inflation estimates for a series of fragile countries.

The following datasets are part of this series:

Country-level inflation:
- All countries: https://microdata.worldbank.org/index.php/catalog/study/WLD_2021_RTFP-CTRY_v02_M

Market-level estimates:
- All countries: https://microdata.worldbank.org/index.php/catalog/study/WLD_2021_RTFP_v02_M
- Afghanistan: https://microdata.worldbank.org/index.php/catalog/study/AFG_2021_RTFP_v02_M
- Burkina Faso: https://microdata.worldbank.org/index.php/catalog/study/BFA_2021_RTFP_v02_M
- Burundi: https://microdata.worldbank.org/index.php/catalog/study/BDI_2021_RTFP_v02_M
- Cameroon: https://microdata.worldbank.org/index.php/catalog/study/CMR_2021_RTFP_v02_M
- Central African Republic: https://microdata.worldbank.org/index.php/catalog/study/CAF_2021_RTFP_v02_M
- Chad: https://microdata.worldbank.org/index.php/catalog/study/TCD_2021_RTFP_v02_M
- Congo, Dem. Rep.: https://microdata.worldbank.org/index.php/catalog/study/COD_2021_RTFP_v02_M
- Congo, Rep.: https://microdata.worldbank.org/index.php/catalog/study/COG_2021_RTFP_v02_M
- Gambia, The: https://microdata.worldbank.org/index.php/catalog/study/GMB_2021_RTFP_v02_M
- Guinea-Bissau: https://microdata.worldbank.org/index.php/catalog/study/GNB_2021_RTFP_v02_M
- Haiti: https://microdata.worldbank.org/index.php/catalog/study/HTI_2021_RTFP_v02_M
- Iraq: https://microdata.worldbank.org/index.php/catalog/study/IRQ_2021_RTFP_v02_M
- Lao PDR: https://microdata.worldbank.org/index.php/catalog/study/LAO_2021_RTFP_v02_M
- Lebanon: https://microdata.worldbank.org/index.php/catalog/study/LBN_2021_RTFP_v02_M
- Liberia: https://microdata.worldbank.org/index.php/catalog/study/LBR_2021_RTFP_v02_M
- Mali: https://microdata.worldbank.org/index.php/catalog/study/MLI_2021_RTFP_v02_M
- Mozambique: https://microdata.worldbank.org/index.php/catalog/study/MOZ_2021_RTFP_v02_M
- Myanmar: https://microdata.worldbank.org/index.php/catalog/study/MMR_2021_RTFP_v02_M
- Niger: https://microdata.worldbank.org/index.php/catalog/study/NER_2021_RTFP_v02_M
- Nigeria: https://microdata.worldbank.org/index.php/catalog/study/NGA_2021_RTFP_v02_M
- Somalia: https://microdata.worldbank.org/index.php/catalog/study/SOM_2021_RTFP_v02_M
- South Sudan: https://microdata.worldbank.org/index.php/catalog/study/SSD_2021_RTFP_v02_M
- Sudan: https://microdata.worldbank.org/index.php/catalog/study/SDN_2021_RTFP_v02_M
- Syrian Arab Republic: https://microdata.worldbank.org/index.php/catalog/study/SYR_2021_RTFP_v02_M
- Yemen, Rep.: https://microdata.worldbank.org/index.php/catalog/study/YEM_2021_RTFP_v02_M

ABSTRACT
Food price inflation is an important metric to inform economic policy but traditional sources of consumer prices are often produced with delay during crises and only at an aggregate level. This may poorly reflect the actual price trends in rural or poverty-stricken areas, where large populations reside in fragile situations.
This data set includes food price estimates and is intended to help gain insight in price developments beyond what can be formally measured by traditional methods. The estimates are generated using a machine-learning approach that imputes ongoing subnational price surveys, often with accuracy similar to direct measurement of prices. The data set provides new opportunities to investigate local price dynamics in areas where populations are sensitive to localized price shocks and where traditional data are not available.

Version

VERSION DATE
2022/05/25 (generated on 2022-05-25)

Scope

NOTES
List of food products included in estimates (not all products are included in country-level estimates): apples, bananas, beans, bread, bulgur, cabbage, carrots, cassava, cassava flour, cassava meal, cheese, chickpeas, cocoyam, cowpeas, cucumbers, dates, eggplants, gari, garlic, groundnuts, lentils, maize, maize flour, maize meal, milk, millet, oil, onions, oranges, parsley, pasta, peas, plantains, potatoes, pulses, rice, salt, salt iodised, sesame, sorghum, sugar, tea, tomatoes, tomatoes paste, watermelons, wheat, wheat flour, yam, yogurt

KEYWORDS

Keyword
inflation
food security
famine
fragility
fragile country
price imputation
food price crisis
food price monitor
fpm
Commodity prices
Food Crises
Maize
Sorghum
Wheat
Rice
Flour
Food Insecurity
Agricultural prices

Coverage

GEOGRAPHIC UNIT
Country

Producers and sponsors

PRIMARY INVESTIGATORS

Name	Affiliation
Bo Pieter Johannes Andrée	World Bank, Development Data Group (DECDG), Data Analytics and Tools unit (DECAT)

FUNDING AGENCY/SPONSOR

Name	Abbreviation	Grant number	Role
Foreign, Commonwealth & Development Office	FCDO (formerly DFID)		Support to data analytics
Foreign, Commonwealth & Development Office	FCDO (formerly DFID)	KP-P174529-KMCE-TF0B4149	Data documentation and dissemination (FCV Data Platform)

OTHER IDENTIFICATIONS/ACKNOWLEDGMENTS

Name	Role	Affiliation
World Food Programme (WFP)	Source of market price data	United Nations

Data Collection

DATES OF DATA COLLECTION

Start	End
2008/01	2022/05

TIME PERIODS

Start date	End date
2008/01	2022/05

Data Processing

METHODOLOGY NOTES

Information on the model used for Afghanistan (see working paper for more information)
Components: Bread (1 KG, Index Weight = 1), Rice (Low Quality) (1 KG, Index Weight = 1), Wheat (1 KG, Index Weight = 1)
Currency: AFN
Number of markets used: 9
Number of markets covered: 40
Number of food items: 3
Number of observations: bread: 1291, rice: 1806, wheat: 1813
Data coverage: 76.02%
Data coverage previous 12 months: 41.67%
Average annualized inflation: 5.98%
Maximum drawdown: -40.76%
Average annualized volatility: 7.74%
Average monthly price correlation between markets: 0.56
Average annual price correlation between markets: 0.87
R squared individual food items: bread: 0.92, rice: 0.88, wheat: 0.91
F confidence score: 0.9
Imputation model: bread: nonlinear, rice: nonlinear, wheat: nonlinear

Information on the model used for Burkina Faso (see working paper for more information)
Components: Beans (Niebe) (1 KG, Index Weight = 1), Maize (White) (1 KG, Index Weight = 1), Millet (1 KG, Index Weight = 1)
Currency: XOF
Number of markets used: 63
Number of markets covered: 64
Number of food items: 3
Number of observations: beans: 4440, maize: 5286, millet: 6133
Data coverage: 45.35%
Data coverage previous 12 months: 86.28%
Average annualized inflation: 7.48%
Maximum drawdown: -37.04%
Average annualized volatility: 14.65%
Average monthly price correlation between markets: 0.67
Average annual price correlation between markets: 0.88
R squared individual food items: maize: 0.8, millet: 0.79, sorghum: 0.77
F confidence score: 0.79
Imputation model: beans: linear, maize: nonlinear, millet: nonlinear

Information on the model used for Burundi (see working paper for more information)
Components: Rice (Low Quality, Local) (1 KG, Index Weight = 1), Beans (1 KG, Index Weight = 1), Maize (White) (1 KG, Index Weight = 1), Bananas (1 KG, Index Weight = 1), Cassava Flour (1 KG, Index Weight = 1), Maize Flour (1 KG, Index Weight = 1), Onions (1 KG, Index Weight = 1), Sweet Potatoes (1 KG, Index Weight = 1)

Currency: BIF
Number of markets used: 63
Number of markets covered: 72
Number of food items: 8
Number of observations: rice: 3810, beans: 3269, maize: 3485, bananas: 3294, cassava_flour: 3883, maize_flour: 3121, onions: 3433, potatoes: 3900
Data coverage: 29.99%
Data coverage previous 12 months: 47.63%
Average annualized inflation: 5.09%
Maximum drawdown: -28.42%
Average annualized volatility: 10.83%
Average monthly price correlation between markets: 0.51
Average annual price correlation between markets: 0.74
R squared individual food items: beans: 0.89, cassava_flour: 0.84, potatoes: 0.78, rice: 0.83, maize: 0.83, bananas: 0.71, maize_flour: 0.81, onions: 0.52
F confidence score: 0.79
Imputation model: rice: linear, beans: nonlinear, maize: linear, bananas: linear, cassava_flour: nonlinear, maize_flour: linear, onions: linear, potatoes: nonlinear

Information on the model used for Cameroon (see working paper for more information)
Components: Oil (Palm) (1 L, Index Weight = 1), Rice (Long Grain, Imported) (1 KG, Index Weight = 1), Wheat Flour (1 KG, Index Weight = 1), Maize (90 KG, Index Weight = 0.01), Bananas (12 KG, Index Weight = 0.08), Potatoes (1 KG, Index Weight = 1), Cassava (Fresh) (5 KG, Index Weight = 0.2), CocoYam (Macabo) (20 KG, Index Weight = 0.05), Plantains (1 KG, Index Weight = 1)
Currency: XAF
Number of markets used: 12
Number of markets covered: 64
Number of food items: 9
Number of observations: oil: 632, rice: 631, wheat_flour: 632, maize: 292, bananas: 422, potatoes: 740, cassava: 405, cocoyam: 431, plantains: 726
Data coverage: 22.76%
Data coverage previous 12 months: 22.84%
Average annualized inflation: 2.16%
Maximum drawdown: -14.84%
Average annualized volatility: 6.13%
Average monthly price correlation between markets: 0.31
Average annual price correlation between markets: 0.35
R squared individual food items: potatoes: 0.65, plantains: 0.7, oil: 0.97, rice: 0.97, wheat_flour: 0.99, maize: 0.98, bananas: 0.96, cassava: 0.94, cocoyam: 0.97
F confidence score: 0.93
Imputation model: oil: linear, rice: linear, wheat_flour: linear, maize: linear, bananas: linear, potatoes: nonlinear, cassava: linear, cocoyam: linear, plantains: nonlinear

Information on the model used for Central African Republic (see working paper for more information)
Components: Oil (Palm) (1 L, Index Weight = 1), Rice (1 KG, Index Weight = 1), Maize (1 KG, Index Weight = 1)
Currency: XAF
Number of markets used: 19
Number of markets covered: 42
Number of food items: 3
Number of observations: oil: 989, rice: 884, maize: 908
Data coverage: 26.81%
Data coverage previous 12 months: 76.43%
Average annualized inflation: 0.67%
Maximum drawdown: -18.88%
Average annualized volatility: 8.55%
Average monthly price correlation between markets: 0.21
Average annual price correlation between markets: 0.04
R squared individual food items: maize: 0.57, cassava: 0.51, oil: 0.58
F confidence score: 0.55
Imputation model: oil: linear, rice: linear, maize: nonlinear

Information on the model used for Chad (see working paper for more information)
Components: Maize (White) (1 KG, Index Weight = 1), Millet (1 KG, Index Weight = 1), Sorghum (Red) (1 KG, Index Weight = 1)
Currency: XAF
Number of markets used: 37
Number of markets covered: 61
Number of food items: 3
Number of observations: maize: 1661, millet: 3191, sorghum: 2679
Data coverage: 35.24%
Data coverage previous 12 months: 59.76%
Average annualized inflation: 4.08%
Maximum drawdown: -42.73%
Average annualized volatility: 16.92%
Average monthly price correlation between markets: 0.54
Average annual price correlation between markets: 0.83
R squared individual food items: maize: 0.67, millet: 0.75, sorghum: 0.73
F confidence score: 0.72
Imputation model: maize: nonlinear, millet: nonlinear, sorghum: nonlinear

Information on the model used for Congo, Dem. Rep. (see working paper for more information)
Components: Oil (Palm) (1 L, Index Weight = 1), Rice (Local) (1 KG, Index Weight = 1), Salt (1 KG, Index Weight = 1), Sugar (1 KG, Index Weight = 1), Wheat Flour (1 KG, Index Weight = 1), Beans (1 KG, Index Weight = 1), Maize (1 KG, Index Weight = 1), Cassava Flour (1 KG, Index Weight = 1), Cassava (Cossette) (1 KG, Index Weight = 1), Plantains (1 KG, Index Weight = 1), Maize Meal (1 KG, Index Weight = 1)
Currency: CDF
Number of markets used: 15
Number of markets covered: 83
Number of food items: 11
Number of observations: oil: 1647, rice: 1498, salt: 1383, sugar: 1396, wheat_flour: 1018, beans: 1299, maize: 1487, cassava_flour: 1653, cassava: 1195, plantains: 1485, maize_meal: 1305
Data coverage: 47.24%
Data coverage previous 12 months: 18.28%
Average annualized inflation: 7.2%
Maximum drawdown: -16.05%
Average annualized volatility: 7.32%
Average monthly price correlation between markets: 0.32
Average annual price correlation between markets: 0.71
R squared individual food items: oil: 0.85, rice: 0.87, salt: 0.85, sugar: 0.92, beans: 0.87, maize: 0.83, cassava_flour: 0.84, cassava: 0.86, plantains: 0.84, maize_meal: 0.81, wheat_flour: 0.6
F confidence score: 0.84
Imputation model: oil: nonlinear, rice: nonlinear, salt: nonlinear, sugar: nonlinear, wheat_flour: linear, beans: nonlinear, maize: nonlinear, cassava_flour: nonlinear, cassava: nonlinear, plantains: nonlinear, maize_meal: nonlinear

Information on the model used for Congo, Rep. (see working paper for more information)
Components: Bread (1 KG, Index Weight = 1), Oil (Palm) (1 L, Index Weight = 1), Rice (Mixed, Low Quality) (1 KG, Index Weight = 1), Wheat Flour (1 KG, Index Weight = 1), Groundnuts (Shelled) (1 KG, Index Weight = 1), Cassava (Fresh) (1 KG, Index Weight = 1)
Currency: XAF
Number of markets used: 5
Number of markets covered: 11
Number of food items: 6
Number of observations: bread: 304, oil: 357, rice: 470, wheat_flour: 226, groundnuts: 340, cassava: 430
Data coverage: 24.74%
Data coverage previous 12 months: 0%
Average annualized inflation: 2.08%
Maximum drawdown: -18.33%
Average annualized volatility: 9.47%
Average monthly price correlation between markets: 0.47
Average annual price correlation between markets: 0.43
R squared individual food items: bread: 0.84, oil: 0.71, rice: 0.74, wheat_flour: 0.91, groundnuts: 0.68, cassava: 0.8

F confidence score: 0.8
Imputation model: bread: linear, oil: linear, rice: linear, wheat_flour: linear, groundnuts: linear, cassava: linear

Information on the model used for Gambia, The (see working paper for more information)
Components: Oil (Vegetable) (1 L, Index Weight = 1), Rice (Small Grain, Imported) (1 KG, Index Weight = 1), Salt (1 KG, Index Weight = 1), Sugar (1 KG, Index Weight = 1), Beans (Dry) (1 KG, Index Weight = 1), Groundnuts (Shelled) (1 KG, Index Weight = 1), Millet (1 KG, Index Weight = 1), Bananas (1 KG, Index Weight = 1), Onions (1 KG, Index Weight = 1), Potatoes (Irish) (1 KG, Index Weight = 1), Tomatoes (1 KG, Index Weight = 1), Milk (1 KG, Index Weight = 1), Cabbage (1 KG, Index Weight = 1), Carrots (1 KG, Index Weight = 1), Garlic (1 KG, Index Weight = 1), Tea (1 Unit, Index Weight = 1)
Currency: GMD
Number of markets used: 13
Number of markets covered: 28
Number of food items: 16
Number of observations: oil: 1099, rice: 2211, salt: 1084, sugar: 1089, beans: 1065, groundnuts: 2098, millet: 2134, bananas: 1079, onions: 1098, potatoes: 1040, tomatoes: 1041, milk: 1068, cabbage: 1042, carrots: 1065, garlic: 985, tea: 1064
Data coverage: 42.47%
Data coverage previous 12 months: 83.33%
Average annualized inflation: 4.54%
Maximum drawdown: -15.41%
Average annualized volatility: 7.08%
Average monthly price correlation between markets: 0.38
Average annual price correlation between markets: 0.78
R squared individual food items: rice: 0.88, groundnuts: 0.83, millet: 0.78, oil: 0.82, salt: 0.92, sugar: 0.88, beans: 0.72, bananas: 0.72, onions: 0.79, potatoes: 0.83, tomatoes: 0.65, milk: 0.73, cabbage: 0.59, carrots: 0.66, garlic: 0.75, tea: 0.78
F confidence score: 0.79
Imputation model: oil: linear, rice: nonlinear, salt: linear, sugar: linear, beans: linear, groundnuts: nonlinear, millet: nonlinear, bananas: linear, onions: linear, potatoes: linear, tomatoes: linear, milk: linear, cabbage: linear, carrots: linear, garlic: linear, tea: linear

Information on the model used for Guinea-Bissau (see working paper for more information)
Components: Oil (Vegetable, Imported) (1 L, Index Weight = 1), Rice (Imported) (1 KG, Index Weight = 1), Sugar (1 KG, Index Weight = 1), Onions (1 KG, Index Weight = 1)
Currency: XOF
Number of markets used: 43
Number of markets covered: 45
Number of food items: 4
Number of observations: oil: 725, rice: 696, sugar: 753, onions: 574
Data coverage: 17.15%
Data coverage previous 12 months: 96.85%
Average annualized inflation: 3.04%
Maximum drawdown: -6.93%
Average annualized volatility: 3.28%
Average monthly price correlation between markets: 0.34
Average annual price correlation between markets: 0.8
R squared individual food items: oil: 0.86, rice: 0.92, sugar: 0.8, onions: 0.75
F confidence score: 0.84
Imputation model: oil: linear, rice: linear, sugar: linear, onions: linear

Information on the model used for Haiti (see working paper for more information)
Components: Oil (Vegetable, Imported) (1 Gallon, Index Weight = 0.26), Sugar (White) (1 Marmite, Index Weight = 0.37), Wheat Flour (Imported) (1 Marmite, Index Weight = 0.37), Beans (Black) (1 Marmite, Index Weight = 0.37), Pasta (350 G, Index Weight = 2.86), Maize Meal (Local) (1 Marmite, Index Weight = 0.37)
Currency: HTG
Number of markets used: 9
Number of markets covered: 9
Number of food items: 6
Number of observations: oil: 827, sugar: 467, wheat_flour: 1506, beans: 920, pasta: 387, maize_meal: 1502
Data coverage: 56.15%

Data coverage previous 12 months: 29.63%
Average annualized inflation: 8.56%
Maximum drawdown: -28.17%
Average annualized volatility: 10.85%
Average monthly price correlation between markets: 0.62
Average annual price correlation between markets: 0.87
R squared individual food items: wheat_flour: 0.81, maize_meal: 0.76, oil: 0.93, sugar: 0.88, beans: 0.87, pasta: 0.95
F confidence score: 0.88
Imputation model: oil: linear, sugar: linear, wheat_flour: nonlinear, beans: linear, pasta: linear, maize_meal: nonlinear

Information on the model used for Iraq (see working paper for more information)
Components: Bread (Khoboz) (1 Unit, Index Weight = 1), Oil (Vegetable) (1 L, Index Weight = 1), Rice (1 KG, Index Weight = 1), Sugar (1 KG, Index Weight = 1), Wheat Flour (1 KG, Index Weight = 1), Beans (White) (1 KG, Index Weight = 1), Potatoes (1 KG, Index Weight = 1), Tomatoes (1 KG, Index Weight = 1), Milk (Powder) (1 KG, Index Weight = 1), Dates (1 KG, Index Weight = 1), Tea (1 KG, Index Weight = 1), Cheese (Local) (1 KG, Index Weight = 1), Lentils (1 KG, Index Weight = 1), Salt (Iodised) (1 KG, Index Weight = 1)
Currency: IQD
Number of markets used: 18
Number of markets covered: 18
Number of food items: 14
Number of observations: bread: 1605, oil: 1415, rice: 1038, sugar: 1520, wheat_flour: 1514, beans: 812, potatoes: 841, tomatoes: 886, milk: 840, dates: 828, tea: 836, cheese: 841, lentils: 814, salt_iodised: 843
Data coverage: 43.33%
Data coverage previous 12 months: 96.89%
Average annualized inflation: 0.64%
Maximum drawdown: -14.49%
Average annualized volatility: 3.39%
Average monthly price correlation between markets: 0.14
Average annual price correlation between markets: 0.32
R squared individual food items: bread: 0.98, oil: 0.94, rice: 0.94, sugar: 0.94, wheat_flour: 0.93, beans: 0.9, potatoes: 0.89, tomatoes: 0.88, milk: 0.89, dates: 0.74, tea: 0.9, cheese: 0.87, lentils: 0.85, salt_iodised: 0.85
F confidence score: 0.91
Imputation model: bread: nonlinear, oil: nonlinear, rice: nonlinear, sugar: nonlinear, wheat_flour: nonlinear, beans: linear, potatoes: linear, tomatoes: linear, milk: linear, dates: linear, tea: linear, cheese: linear, lentils: linear, salt_iodised: linear

Information on the model used for Lao PDR (see working paper for more information)
Components: Oil (Soybean) (1 L, Index Weight = 1), Rice (Glutinous, Second Quality) (1 KG, Index Weight = 1), Sugar (Brown) (1 KG, Index Weight = 1), Garlic (Small) (1 KG, Index Weight = 1)
Currency: LAK
Number of markets used: 17
Number of markets covered: 17
Number of food items: 4
Number of observations: oil: 1357, rice: 1671, sugar: 1330, garlic: 1295
Data coverage: 52.95%
Data coverage previous 12 months: 76.84%
Average annualized inflation: 1.82%
Maximum drawdown: -3.83%
Average annualized volatility: 2.06%
Average monthly price correlation between markets: 0.1
Average annual price correlation between markets: 0.35
R squared individual food items: oil: 0.88, rice: 0.87, sugar: 0.88, garlic: 0.73
F confidence score: 0.85
Imputation model: oil: linear, rice: linear, sugar: linear, garlic: linear

Information on the model used for Lebanon (see working paper for more information)
Components: Bread (Pita) (1 KG, Index Weight = 1), Oil (Sunflower) (5 L, Index Weight = 0.2), Rice (Imported, Egyptian) (1 KG, Index Weight = 1), Salt (1 KG, Index Weight = 1), Sugar (White) (1 KG, Index Weight = 1), Wheat Flour (1 KG, Index Weight = 1), Beans (White) (1 KG, Index Weight = 1), Milk (Powder) (900 G, Index Weight = 1.11), Pasta (Spaghetti) (1 KG, Index Weight = 1), Cabbage (1 KG, Index Weight = 1), Cucumbers (Greenhouse) (1 KG, Index Weight = 1), Tomatoes (Paste)

(1.3 KG, Index Weight = 0.77), Bulgur (Brown) (1 KG, Index Weight = 1), Cheese (Picon) (160 G, Index Weight = 6.25), Chickpeas (1 KG, Index Weight = 1), Lentils (Red) (1 KG, Index Weight = 1)
Currency: LBP
Number of markets used: 26
Number of markets covered: 26
Number of food items: 16
Number of observations: bread: 2149, oil: 1667, rice: 2295, salt: 2040, sugar: 2285, wheat_flour: 1074, beans: 2269, milk: 2231, pasta: 2322, cabbage: 820, cucumbers: 757, tomatoes_paste: 1771, bulgur: 2351, cheese: 2236, chickpeas: 1604, lentils: 1159
Data coverage: 56.73%
Data coverage previous 12 months: 44.41%
Average annualized inflation: 35.4%
Maximum drawdown: -18.15%
Average annualized volatility: 18.76%
Average monthly price correlation between markets: 0.84
Average annual price correlation between markets: 1
R squared individual food items: bread: 0.98, oil: 0.97, rice: 0.91, salt: 0.93, sugar: 0.93, beans: 0.91, milk: 0.98, pasta: 0.87, cabbage: 0.9, tomatoes_paste: 0.92, bulgur: 0.92, cheese: 0.96, wheat_flour: 0.76, cucumbers: 0.75, chickpeas: 0.72, lentils: 0.8
F confidence score: 0.88
Imputation model: bread: nonlinear, oil: nonlinear, rice: nonlinear, salt: nonlinear, sugar: nonlinear, wheat_flour: linear, beans: nonlinear, milk: nonlinear, pasta: nonlinear, cabbage: nonlinear, cucumbers: linear, tomatoes_paste: nonlinear, bulgur: nonlinear, cheese: nonlinear, chickpeas: linear, lentils: linear

Information on the model used for Liberia (see working paper for more information)
Components: Oil (Palm) (1 Gallon, Index Weight = 0.26), Rice (Imported) (50 KG, Index Weight = 0.02), Cassava (Fresh) (50 KG, Index Weight = 0.02), Cowpeas (1 KG, Index Weight = 1)
Currency: LRD
Number of markets used: 17
Number of markets covered: 24
Number of food items: 4
Number of observations: oil: 1004, rice: 1388, cassava: 1052, cowpeas: 1077
Data coverage: 25.73%
Data coverage previous 12 months: 0%
Average annualized inflation: 8.23%
Maximum drawdown: -9.33%
Average annualized volatility: 6.48%
Average monthly price correlation between markets: 0.22
Average annual price correlation between markets: 0.38
R squared individual food items: oil: 0.9, rice: 0.95, cassava: 0.84, cowpeas: 0.9
F confidence score: 0.9
Imputation model: oil: linear, rice: linear, cassava: linear, cowpeas: linear

Information on the model used for Mali (see working paper for more information)
Components: Rice (Local) (1 KG, Index Weight = 1), Beans (Niebe) (1 KG, Index Weight = 1), Groundnuts (Shelled) (1 KG, Index Weight = 1), Maize (1 KG, Index Weight = 1), Millet (1 KG, Index Weight = 1), Sorghum (1 KG, Index Weight = 1)
Currency: XOF
Number of markets used: 80
Number of markets covered: 127
Number of food items: 6
Number of observations: rice: 9772, beans: 4948, groundnuts: 4463, maize: 7562, millet: 10492, sorghum: 9993
Data coverage: 52.84%
Data coverage previous 12 months: 76.67%
Average annualized inflation: 4.46%
Maximum drawdown: -25.21%
Average annualized volatility: 7.86%
Average monthly price correlation between markets: 0.6
Average annual price correlation between markets: 0.9
R squared individual food items: rice: 0.95, maize: 0.86, millet: 0.88, sorghum: 0.89, beans: 0.62, groundnuts: 0.6
F confidence score: 0.84

Imputation model: rice: nonlinear, beans: linear, groundnuts: linear, maize: nonlinear, millet: nonlinear, sorghum: nonlinear

Information on the model used for Mozambique (see working paper for more information)
Components: Oil (Vegetable, Local) (1 L, Index Weight = 1), Rice (Imported) (1 KG, Index Weight = 1), Sugar (Brown, Local) (1 KG, Index Weight = 1), Wheat Flour (Local) (1 KG, Index Weight = 1), Groundnuts (Small, Shelled) (1 KG, Index Weight = 1), Maize (White) (1 KG, Index Weight = 1), Cowpeas (1 KG, Index Weight = 1)
Currency: MZN
Number of markets used: 24
Number of markets covered: 95
Number of food items: 7
Number of observations: oil: 3211, rice: 3202, sugar: 3236, wheat_flour: 2269, groundnuts: 2074, maize: 3492, cowpeas: 2251
Data coverage: 61.17%
Data coverage previous 12 months: 32.16%
Average annualized inflation: 8.02%
Maximum drawdown: -30.53%
Average annualized volatility: 8.07%
Average monthly price correlation between markets: 0.33
Average annual price correlation between markets: 0.87
R squared individual food items: oil: 0.92, rice: 0.91, sugar: 0.94, groundnuts: 0.83, maize: 0.91, cowpeas: 0.76, maize_meal: 0.9
F confidence score: 0.89
Imputation model: oil: nonlinear, rice: nonlinear, sugar: nonlinear, wheat_flour: linear, groundnuts: nonlinear, maize: nonlinear, cowpeas: nonlinear

Information on the model used for Myanmar (see working paper for more information)
Components: Oil (Palm) (1 L, Index Weight = 1), Pulses (1 KG, Index Weight = 1), Rice (Low Quality) (1 KG, Index Weight = 1)
Currency: MMK
Number of markets used: 33
Number of markets covered: 186
Number of food items: 3
Number of observations: oil: 2654, pulses: 2733, rice: 4251
Data coverage: 42.02%
Data coverage previous 12 months: 35.1%
Average annualized inflation: 4.7%
Maximum drawdown: -32.15%
Average annualized volatility: 9.23%
Average monthly price correlation between markets: 0.28
Average annual price correlation between markets: 0.74
R squared individual food items: oil: 0.93, rice: 0.88, salt: 0.84
F confidence score: 0.89
Imputation model: oil: nonlinear, pulses: linear, rice: nonlinear

Information on the model used for Niger (see working paper for more information)
Components: Rice (Imported) (1 KG, Index Weight = 1), Maize (1 KG, Index Weight = 1), Millet (1 KG, Index Weight = 1), Sorghum (1 KG, Index Weight = 1)
Currency: XOF
Number of markets used: 68
Number of markets covered: 79
Number of food items: 4
Number of observations: rice: 9163, maize: 8292, millet: 10454, sorghum: 9197
Data coverage: 73.51%
Data coverage previous 12 months: 65.9%
Average annualized inflation: 3.2%
Maximum drawdown: -23.6%
Average annualized volatility: 8.96%
Average monthly price correlation between markets: 0.49
Average annual price correlation between markets: 0.78

R squared individual food items: rice: 0.94, maize: 0.82, millet: 0.85, sorghum: 0.82
F confidence score: 0.87
Imputation model: rice: nonlinear, maize: nonlinear, millet: nonlinear, sorghum: nonlinear

Information on the model used for Nigeria (see working paper for more information)
Components: Oil (Palm) (750 ML, Index Weight = 1.33), Rice (Imported) (50 KG, Index Weight = 0.02), Salt (250 G, Index Weight = 4), Sugar (1.3 KG, Index Weight = 0.77), Groundnuts (Shelled) (100 KG, Index Weight = 0.01), Maize (White) (100 KG, Index Weight = 0.01), Millet (100 KG, Index Weight = 0.01), Sorghum (White) (100 KG, Index Weight = 0.01), Bananas (1.3 KG, Index Weight = 0.77), Maize Flour (1.3 KG, Index Weight = 0.77), Tomatoes (0.5 KG, Index Weight = 2), Cassava Meal (Gari, Yellow) (100 KG, Index Weight = 0.01), Cowpeas (White) (100 KG, Index Weight = 0.01), Milk (20 G, Index Weight = 50), Yam (1 KG, Index Weight = 1), Oranges (400 G, Index Weight = 2.5), Watermelons (2.1 KG, Index Weight = 0.48), Gari (White) (100 KG, Index Weight = 0.01)
Currency: NGN
Number of markets used: 33
Number of markets covered: 35
Number of food items: 18
Number of observations: oil: 1006, rice: 1198, salt: 798, sugar: 841, groundnuts: 1225, maize: 1418, millet: 1299, sorghum: 1387, bananas: 964, maize_flour: 1034, tomatoes: 904, cassava_meal: 979, cowpeas: 1299, milk: 990, yam: 882, oranges: 982, watermelons: 1015, gari: 1170
Data coverage: 26.87%
Data coverage previous 12 months: 31.89%
Average annualized inflation: 4.38%
Maximum drawdown: -21.84%
Average annualized volatility: 5.4%
Average monthly price correlation between markets: 0.45
Average annual price correlation between markets: 0.91
R squared individual food items: rice: 0.92, groundnuts: 0.91, maize: 0.91, millet: 0.9, sorghum: 0.91, cassava_meal: 0.91, cowpeas: 0.88, gari: 0.91, oil: 0.89, salt: 0.93, sugar: 0.99, bananas: 0.84, maize_flour: 0.97, tomatoes: 0.95, milk: 0.99, yam: 0.98, oranges: 0.94, watermelons: 0.95
F confidence score: 0.95
Imputation model: oil: linear, rice: nonlinear, salt: linear, sugar: linear, groundnuts: nonlinear, maize: nonlinear, millet: nonlinear, sorghum: nonlinear, bananas: linear, maize_flour: linear, tomatoes: linear, cassava_meal: nonlinear, cowpeas: nonlinear, milk: linear, yam: linear, oranges: linear, watermelons: linear, gari: nonlinear

Information on the model used for Somalia (see working paper for more information)
Components: Oil (Vegetable, Imported) (1 L, Index Weight = 1), Rice (Imported) (1 KG, Index Weight = 1), Maize (White) (1 KG, Index Weight = 1), Milk (Camel) (1 L, Index Weight = 1)
Currency: SOS
Number of markets used: 21
Number of markets covered: 29
Number of food items: 4
Number of observations: oil: 698, rice: 1817, maize: 2185, milk: 539
Data coverage: 32.55%
Data coverage previous 12 months: 36.75%
Average annualized inflation: 5.96%
Maximum drawdown: -42.35%
Average annualized volatility: 10.79%
Average monthly price correlation between markets: 0.43
Average annual price correlation between markets: 0.75
R squared individual food items: rice: 0.89, maize: 0.88, sorghum: 0.87, milk: 0.41
F confidence score: 0.81
Imputation model: oil: linear, rice: nonlinear, maize: nonlinear, milk: linear

Information on the model used for South Sudan (see working paper for more information)
Components: Oil (Vegetable) (1 L, Index Weight = 1), Wheat Flour (1 KG, Index Weight = 1), Beans (Red) (1 KG, Index Weight = 1), Groundnuts (Shelled) (1 KG, Index Weight = 1), Maize (White) (3.5 KG, Index Weight = 0.29), Millet (White) (3.5 KG, Index Weight = 0.29), Sorghum (White, Imported) (3.5 KG, Index Weight = 0.29), Sesame (3.5 KG, Index Weight = 0.29)
Currency: SSP
Number of markets used: 12

Number of markets covered: 24
Number of food items: 8
Number of observations: oil: 931, wheat_flour: 493, beans: 1193, groundnuts: 933, maize: 879, millet: 469, sorghum: 1158, sesame: 697
Data coverage: 39.1%
Data coverage previous 12 months: 56.16%
Average annualized inflation: 39.65%
Maximum drawdown: -57.86%
Average annualized volatility: 32.91%
Average monthly price correlation between markets: 0.72
Average annual price correlation between markets: 0.97
R squared individual food items: wheat_flour: 0.89, beans: 0.88, groundnuts: 0.88, maize: 0.85, millet: 0.85, sorghum: 0.83, sesame: 0.86, oil: 0.84
F confidence score: 0.87
Imputation model: oil: linear, wheat_flour: nonlinear, beans: nonlinear, groundnuts: nonlinear, maize: nonlinear, millet: nonlinear, sorghum: nonlinear, sesame: nonlinear

Information on the model used for Sudan (see working paper for more information)
Components: Wheat (90 KG, Index Weight = 0.01), Millet (3.5 KG, Index Weight = 0.29), Sorghum (White) (90 KG, Index Weight = 0.01)
Currency: SDG
Number of markets used: 15
Number of markets covered: 15
Number of food items: 3
Number of observations: wheat: 675, millet: 1899, sorghum: 1403
Data coverage: 47.77%
Data coverage previous 12 months: 43.52%
Average annualized inflation: 51.14%
Maximum drawdown: -26.22%
Average annualized volatility: 22.33%
Average monthly price correlation between markets: 0.39
Average annual price correlation between markets: 0.86
R squared individual food items: millet: 0.93, sorghum: 0.94, wheat: 0.82
F confidence score: 0.94
Imputation model: wheat: linear, millet: nonlinear, sorghum: nonlinear

Information on the model used for Syrian Arab Republic (see working paper for more information)
Components: Bread (Bakery) (1.1 KG, Index Weight = 0.91), Oil (1 L, Index Weight = 1), Rice (1 KG, Index Weight = 1), Sugar (1 KG, Index Weight = 1), Wheat Flour (1 KG, Index Weight = 1), Beans (White) (1 KG, Index Weight = 1), Bananas (1 KG, Index Weight = 1), Potatoes (1 KG, Index Weight = 1), Tomatoes (1 KG, Index Weight = 1), Apples (1 KG, Index Weight = 1), Dates (1 KG, Index Weight = 1), Eggplants (1 KG, Index Weight = 1), Yogurt (1 KG, Index Weight = 1), Bulgur (1 KG, Index Weight = 1), Cheese (1 KG, Index Weight = 1), ChickPeas (Yellow) (1 KG, Index Weight = 1), Lentils (1 KG, Index Weight = 1), Salt (Iodised) (1 KG, Index Weight = 1), Parsley (1 Packet, Index Weight = 2)
Currency: SYP
Number of markets used: 56
Number of markets covered: 97
Number of food items: 19
Number of observations: bread: 3684, oil: 3883, rice: 3134, sugar: 3943, wheat_flour: 3863, beans: 2542, bananas: 1892, potatoes: 2119, tomatoes: 2951, apples: 1986, dates: 2761, eggplants: 1993, yogurt: 2807, bulgur: 2598, cheese: 2764, chickpeas: 2746, lentils: 3852, salt_iodised: 2527, parsley: 2821
Data coverage: 38.12%
Data coverage previous 12 months: 82.1%
Average annualized inflation: 32.1%
Maximum drawdown: -22.64%
Average annualized volatility: 15.39%
Average monthly price correlation between markets: 0.63
Average annual price correlation between markets: 0.96
R squared individual food items: bread: 0.95, oil: 0.95, rice: 0.91, sugar: 0.93, wheat_flour: 0.93, lentils: 0.91, beans: 0.83, bananas: 0.83, potatoes: 0.76, tomatoes: 0.85, apples: 0.84, dates: 0.86, eggplants: 0.82, yogurt: 0.82, bulgur: 0.85, cheese: 0.89, chickpeas: 0.77, salt_iodised: 0.82, parsley: 0.88

F confidence score: 0.87
Imputation model: bread: nonlinear, oil: nonlinear, rice: nonlinear, sugar: nonlinear, wheat_flour: nonlinear, beans: linear, bananas: linear, potatoes: linear, tomatoes: linear, apples: linear, dates: linear, eggplants: linear, yogurt: linear, bulgur: linear, cheese: linear, chickpeas: linear, lentils: nonlinear, salt_iodised: linear, parsley: linear

Information on the model used for Yemen, Rep. (see working paper for more information)
Components: Oil (Vegetable) (1 L, Index Weight = 1), Rice (Imported) (1 KG, Index Weight = 1), Salt (1 KG, Index Weight = 1), Sugar (1 KG, Index Weight = 1), Wheat (1 KG, Index Weight = 1), Wheat Flour (1 KG, Index Weight = 1), Beans (Kidney Red) (1 KG, Index Weight = 1), Onions (1 KG, Index Weight = 1), Potatoes (1 KG, Index Weight = 1), Tomatoes (1 KG, Index Weight = 1), Peas (Yellow, Split) (1 KG, Index Weight = 1), Lentils (1 KG, Index Weight = 1)
Currency: YER
Number of markets used: 23
Number of markets covered: 23
Number of food items: 12
Number of observations: oil: 1591, rice: 1498, salt: 1521, sugar: 1620, wheat: 1878, wheat_flour: 1185, beans: 1649, onions: 1809, potatoes: 1779, tomatoes: 1800, peas: 1263, lentils: 1525
Data coverage: 42.5%
Data coverage previous 12 months: 81.16%
Average annualized inflation: 11.21%
Maximum drawdown: -26.49%
Average annualized volatility: 11.99%
Average monthly price correlation between markets: 0.58
Average annual price correlation between markets: 0.79
R squared individual food items: wheat: 0.75, wheat_flour: 0.81, oil: 0.73, rice: 0.81, salt: 0.77, sugar: 0.79, beans: 0.82, onions: 0.7, potatoes: 0.73, tomatoes: 0.6, peas: 0.51, lentils: 0.76
F confidence score: 0.74
Imputation model: oil: linear, rice: linear, salt: linear, sugar: linear, wheat: nonlinear, wheat_flour: nonlinear, beans: linear, onions: linear, potatoes: linear, tomatoes: linear, peas: linear, lentils: linear

Access policy

RESTRICTIONS
The estimates presented in this dataset are all based on publicly-available data from the World Food Programme.
The dataset of price estimates is published as open data.

CITATION REQUIREMENTS
Please cite this dataset as follows: Andrée, B. P. J. (2021). Monthly food price inflation estimates by country (Version 2022-05-25). WLD_2021_RTFP-CTRY_v02_M. Washington, DC: World Bank Microdata Library.

ACCESS AUTHORITY

Name	Affiliation	URL
Data Help Desk	World Bank, Development Data Group	Link

LOCATION OF DATA COLLECTION
World Bank Microdata Library, FCV

Data Dictionary

Data file	Cases	Variables
RTFP_country_2022-05-25.csv Monthly estimates of food prices and inflation by country	4625	8

Data file: RTFP_country_2022-05-25.csv

Monthly estimates of food prices and inflation by country

Cases:	4625
Variables:	8

Variables

ID	Name	Label	Question
V001	Open	Monthly food price estimate (open)	
V002	High	Monthly food price estimate (high)	
V003	Low	Monthly food price estimate (low)	
V004	Close	Monthly food price estimate (close)	
V005	Inflation	Monthly estimate of food price inflation	
V006	country	Country name	
V007	ISO3	Country name	
V008	date	Date of estimate (month/day/year)	

Total: 8

OPEN: Monthly food price estimate (open)

Data file: RTFP_country_2022-05-25.csv

Overview

var_Number of valid values: 4299

HIGH: Monthly food price estimate (high)

Data file: RTFP_country_2022-05-25.csv

Overview

var_Number of valid values: 4299

LOW: Monthly food price estimate (low)

Data file: RTFP_country_2022-05-25.csv

Overview

var_Number of valid values: 4299

CLOSE: Monthly food price estimate (close)

Data file: RTFP_country_2022-05-25.csv

Overview

var_Number of valid values: 4299

INFLATION: Monthly estimate of food price inflation

Data file: RTFP_country_2022-05-25.csv

Overview

var_Number of valid values: 3999

COUNTRY: Country name

Data file: RTFP_country_2022-05-25.csv

Overview

var_Number of valid values: 4625

ISO3: Country name

Data file: RTFP_country_2022-05-25.csv

Overview

var_Number of valid values: 4625

DATE: Date of estimate (month/day/year)

Data file: RTFP_country_2022-05-25.csv

Overview

var_Number of valid values: 4625

Documentation

Reports

Advanced Analytics: Toward real-time local food prices in FCS countries

Title	Advanced Analytics: Toward real-time local food prices in FCS countries
Author(s)	Bo Pieter Johannes Andrée
Date	2021-03
Language	English
Description	Powerpoint presentation on main results for Yemen
Filename	prices presentation - GOST.zip

Working paper: Estimating Food Price Inflation from Partial Surveys

Title	Working paper: Estimating Food Price Inflation from Partial Surveys
Author(s)	Bo Pieter Johannes Andrée
Date	2021-12
Language	English
Description	Policy Research Working Paper on Estimating Food Price Inflation from Partial Surveys
Filename	https://doi.org/10.1596/1813-9450-9886

Working paper: Predicting Food Crises

Title	Working paper: Predicting Food Crises
Author(s)	Bo Pieter Johannes Andrée, Andres Chamorro, Aart Kraay, Phoebe Spencer, Dieter Wang
Date	2020-09
Language	English
Description	Policy Research Working Paper on Predicting Food Crises
Filename	https://openknowledge.worldbank.org/handle/10986/34510

Working paper: Stochastic Modeling of Food Insecurity

Title	Working paper: Stochastic Modeling of Food Insecurity
Author(s)	Dieter Wang, Bo Pieter Johannes Andrée, Andres Fernando Chamorro, Phoebe Girouard Spencer
Date	2020-09
Language	English
Description	Policy Research Working Paper on Stochastic Modeling of Food Insecurity
Filename	https://openknowledge.worldbank.org/handle/10986/34511

Other materials

Monthly food price estimates by product and market

Title	Monthly food price estimates by product and market
Author(s)	Bo Pieter Johannes Andrée
Date	2022-05-25

Language	English
Description	Link to a dataset containing the modeled monthly estimates of market-level and product-level price estimates for all available countries
Filename	https://microdata.worldbank.org/index.php/catalog/study/WLD_2021_RTFP_v02_M

Global Food Prices Database (WFP)

Title	Global Food Prices Database (WFP)
Author(s)	The World Food Programme
Language	English
Description	This dataset contains Global Food Prices data from the World Food Programme covering foods such as maize, rice, beans, fish, and sugar for 76 countries and some 1,500 markets. It is updated weekly but contains to a large extent monthly data. The data goes back as far as 1992 for a few countries, although many countries started reporting from 2003 or thereafter.
Filename	https://data.humdata.org/organization/wfp?vocab_Topics=prices