



Challenges in integrating Market Prices and Traditional Agricultural Price Statistics

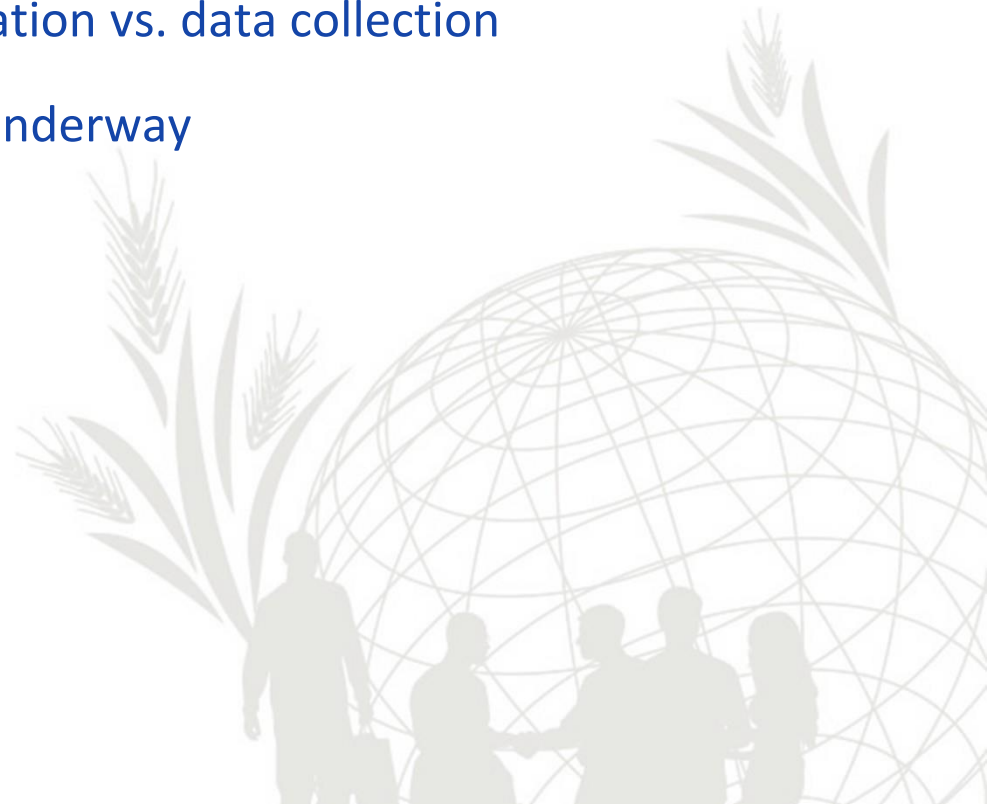
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Outline

1. Background: Types of price statistics/market information; their characteristics; their producers; and their users and uses.
2. Rationale from and Challenges to Integration
3. When to integrate: data dissemination vs. data collection
4. Integration examples / initiatives underway
5. Recommendations, for discussion



Background – Types of Price Statistics/Information

1. Price statistics typically include food consumer price indexes (food CPIs); agricultural producer prices and producer price indexes PPIs); and in some cases, wholesale prices/price indexes.
2. Price statistics can also include international commodity prices, as announced on stock and commodity exchanges.
3. Market price information, such as that provided in agricultural market information systems, provide a measure of wholesale or retail prices of specific food/agricultural products in specific markets/city in a country.



Background – Price characteristics & Producers

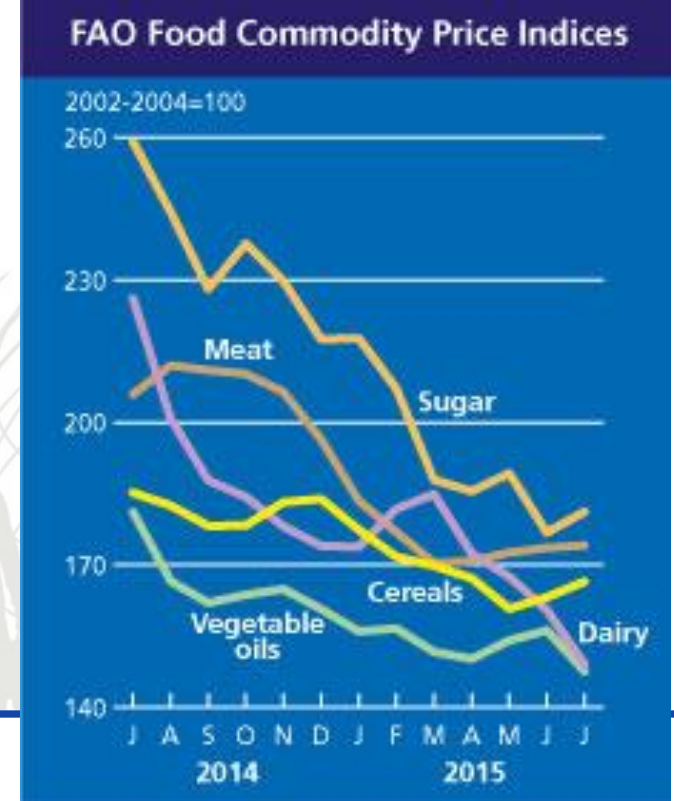
1. Food CPIs and agricultural producer prices and PPIs are typically produced by National Statistics Organizations (NSOs), following established international methodologies:
 - a) International classification systems, such as the Central Classification System (CPC), Harmonized System (HS), or Classification of Individual Consumption according to Purpose (COICOP) CPC, HS, and/or COICOP)
 - b) CPIs and food CPIs are typically produced monthly; disseminated within a few days to two weeks of the reference month; and representative of large urban areas. Many countries provide sub-national food CPIs; a few also provide prices of individual products or CPIs for food commodity groups.
 - c) Producer Prices (or farm-gate prices, or prices received by farmers) are typically produced monthly or quarterly; nationally representative; disseminated within a few weeks of the reference period. Many countries provide individual produce level prices. Due to data collection challenges, some countries collect wholesale prices (prices received by wholesales) instead of producer prices.

Regional and international organizations, such as FAO, the ILO and the IMF, often compile such statistics into a global database in order to permit international comparisons.



Background – Price characteristics & Producers

2. International commodity prices (and trade volumes) are collected and disseminated daily by commodity exchanges, such as the Chicago Mercantile Exchange (CME). They may be compiled into indices by both private and public sector organizations, such as the Food Price Index (FPI) and Food Commodity Price Indices, compiled by FAO.
- a) Commodity exchanges typically provide high frequency and detailed data in near real-time.
 - b) Since these exchanges also deal in options and speculation, prices may signal shortages/surpluses due to expected weather conditions, public policies, and or conflicts in key regions. As such, these prices can be transmitted to consumer prices, as well as from and to producer prices



Price transmission example: the FAO FPI and Global Food CPIs

Chart 6.a: FPI vs Food CPI - different scale

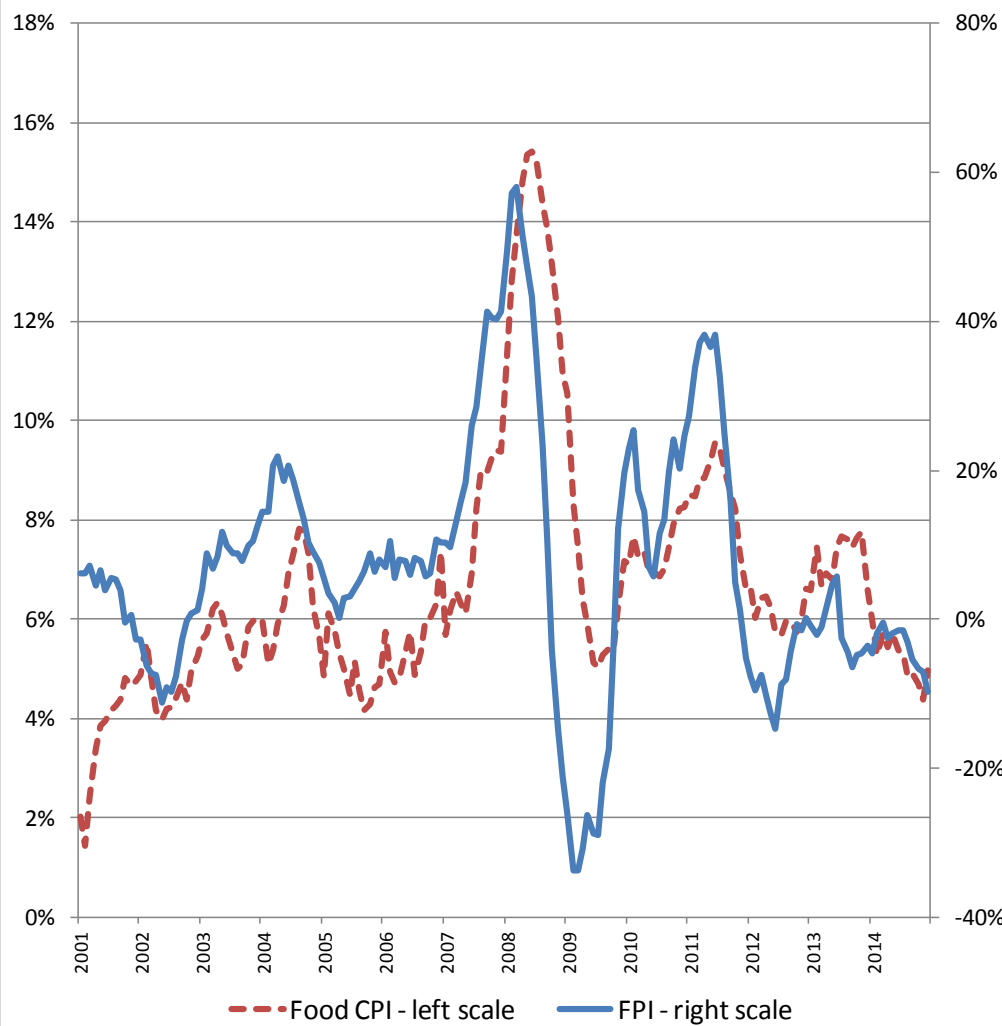
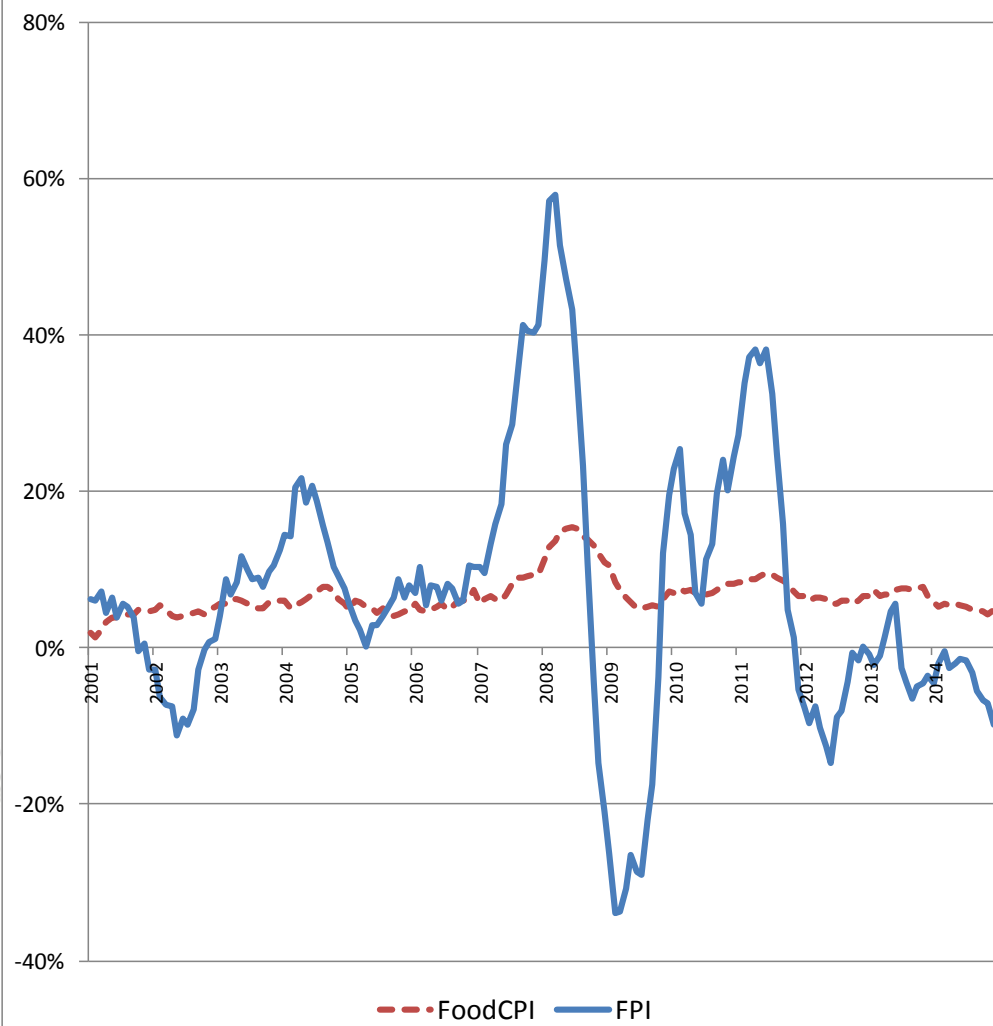


Chart 6.b: FPI vs Food CPI - same scale



Some FAO Price Series & Analysis ...

Regional and Global Food CPI Analysis: <http://www.fao.org/economic/ess/ess-economic/cpi/en/#.VemlGGb21R0>

GIEWS/FPMA Market Price/Early Warning: <http://www.fao.org/giews/food-prices/home/en/>

FAO Food Price Index: <http://www.fao.org/worldfoodsituation/foodpricesindex/en/>

FAOSTAT Producer Prices: <http://faostat3.fao.org/browse/P/PP/S>



Background – Price characteristics & Producers

3. Prices collected as part of Agricultural Market Information measure the wholesale or retail prices of key strategic products/commodities

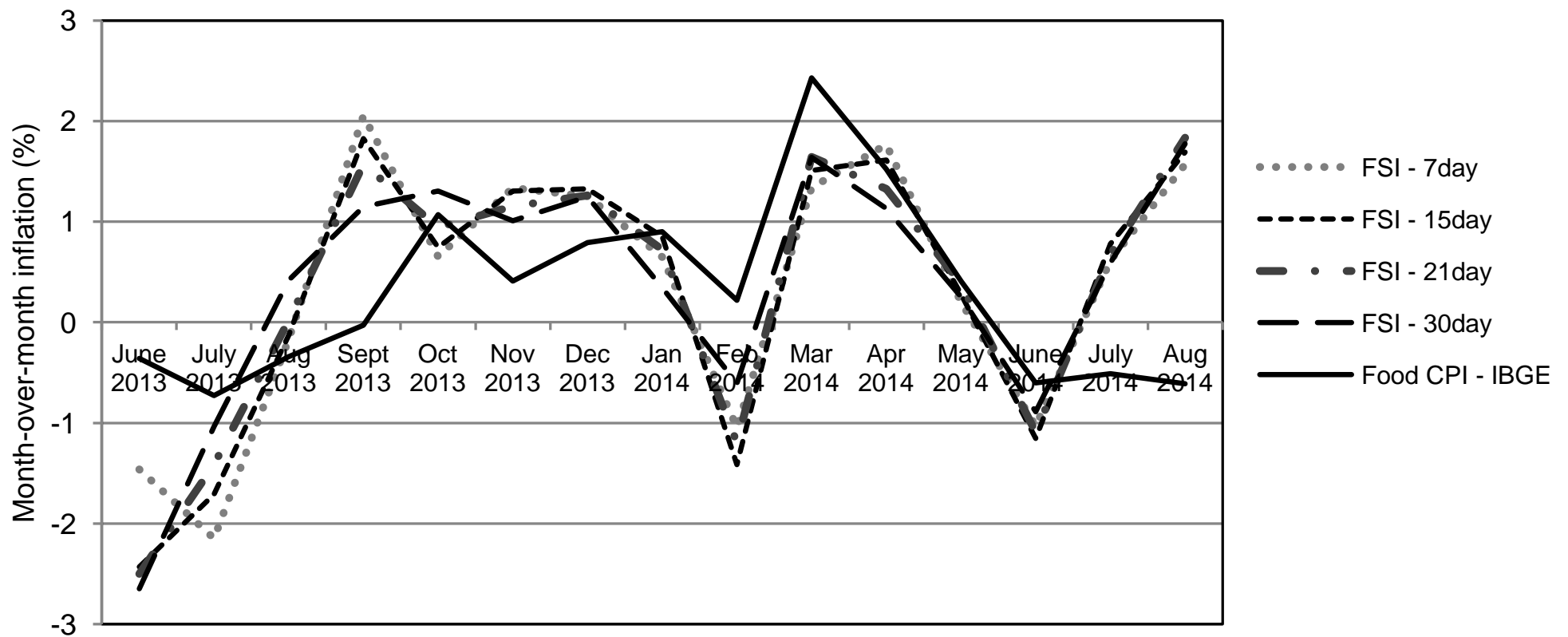
Typically collected by a Ministry of Agriculture (MoA) , regional or international organization (e.g. African Development Bank, World Food Program, World Bank), or private/producers association to monitor food prices and food security issues, often in specific markets and regions in a country.

- a) usually real-time, collected daily (or several times a week) often to publish the same day.
- b) limited number of price quotes for key products and markets, typically not nationally or regionally representative
- c) Limited systematic dissemination of historical data, which limits comparisons
- d) Increasing use of mobile applications to collect price data: pilot FAO-Kenya initiative; WFP initiatives in remote food insecurity areas in Africa; joint EU-AFDB initiative.
- e) Price data collection by Producers Associations and other private firms: One private US company, Premise, integrates price data collection with food CPI computation using national classification systems and expenditure weights and traditional sampling methods.



Background – Price characteristics & Producers

Consumer Food Price Inflation, Brazil's official statistics versus the Premise Food Staples Index, Jan 2013-Aug 2014



Data Source: Instituto Brasileiro de Geografia e Estatística (IBGE) and Premise

Rationale for and Challenges to Price data Integration

1. Integrating price information/statistics across sources provides a chance to:
 - Identify synergies and improve efficiencies from reduced duplication
 - Better understand the uses and complementarities behind price information
 - Study price transmission internationally/nationally/regionally/globally and between international markets, producers and consumers.
 - Preserve historical information and improve data access

2. Challenges arise from:
 - Need to ensure existing users needs continue to be met.
 - Differences in product coverage; absence of standard methodologies and classification systems; differences in data quality and representativity.
 - Need to establish new methodologies for compiling global databases (i.e. which exchange rate; what weights for regional/global indices; etc.)

Traditional price statistics are not yet capable of providing the high frequency, real time market information needed for food security early warning.



When to Integrate: dissemination vs. collection

- **Integration at the point of dissemination:**
 - Lower cost option; preserves traditional uses of price data.
 - Requires identification of key products to cover, based on strategic importance and data quality. Requires solid metadata to explain data limitations; rebasing to consistent base periods.
- **Integration at the point of collection:**
 - High cost option; market prices should follow statistical classifications and data collection methodologies (e.g. weighting).
 - Requires care to ensure market prices continue to provide strategic and timely information for food security warnings; may re
 - A successful example if the private sector firm, Premise <https://www.premise.com/thenetwork/>



Integration examples / initiatives underway

- Food Security Information Network (FSIN) – Informal Technical Working Group on Harmonization of Global Food Price Datasets, formed by FAO, FEWSNET (Famine Early Warning Systems) and WFP:
 - FSIN is a global initiative co-sponsored by FAO, WFP and IFPI to strengthen food and nutrition security information systems, for producing reliable and accurate data to guide analysis and decision-making
 - The TWG on Price Data Harmonization is currently looking at challenges and potential solutions to integrating price data from across the three organizations, such as the need for common classification systems, expansion of CPC to get more granular product detail, etc.
- FAO/ESS proposal to integrate historical FAO price data into FAOSTAT
 - Terms of reference developed expert price statistician/economist to undertake work
 - Output: tested set of recommendations for price integration including: product selection; base period and classification system use; metadata requirements.



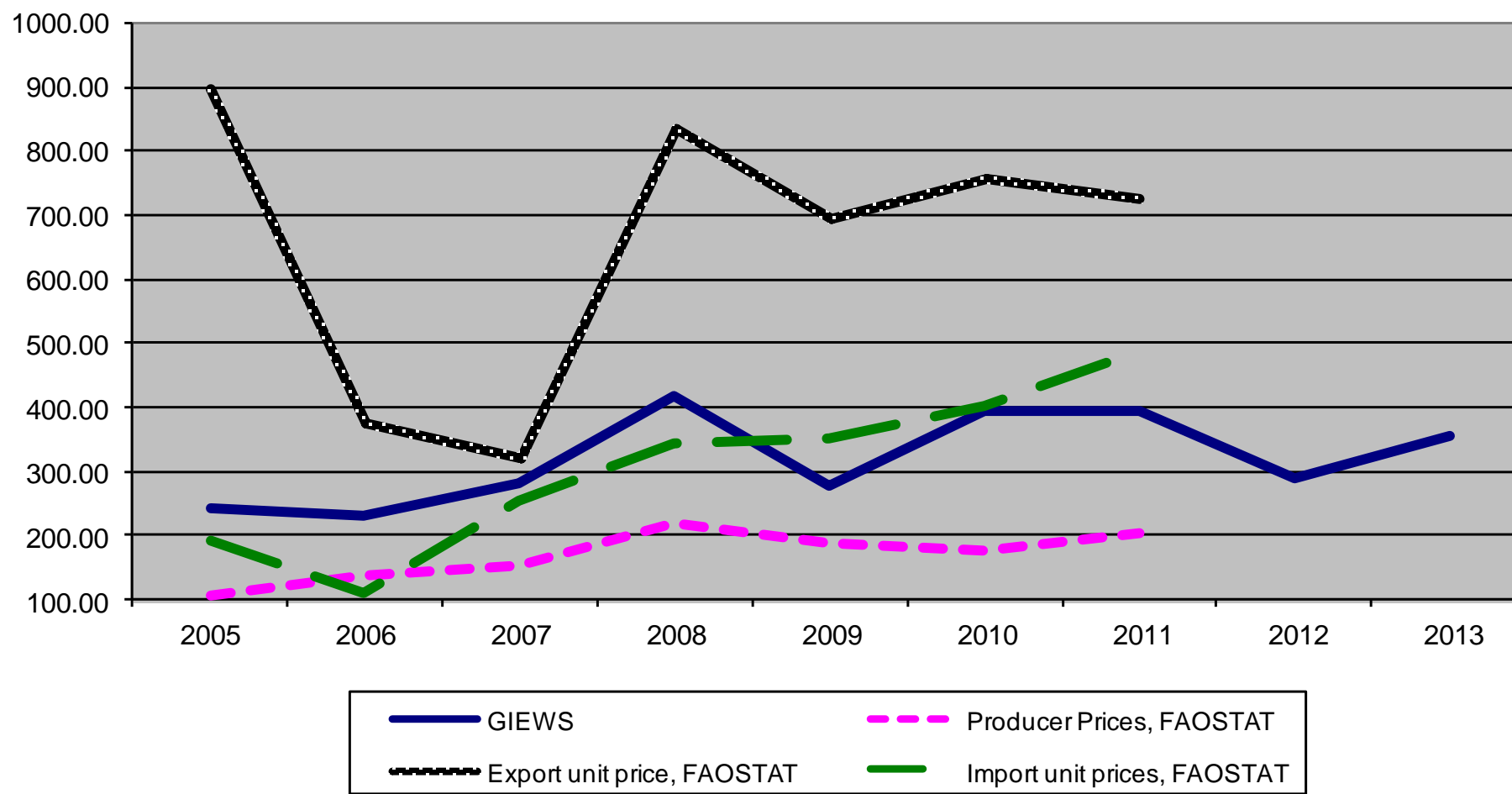
Integration examples: FAO price data series

- FAO price datasets:
 - Food Price Index, Food Commodity Price Indexes and International Commodity price database
 - GIEWS and the Food Price Data and Analysis Tool (market prices)
 - FAOSTAT Regional and Global Food CPI
 - FAOSTAT Monthly & annual Producer Prices, annual Producer Price Indexes
 - FAOSTAT Trade (derived unit export and import prices)
- Characteristics of these data:
 - No common platform for all series; no common dissemination format or classification system; poor metadata; lack of consistent base year.



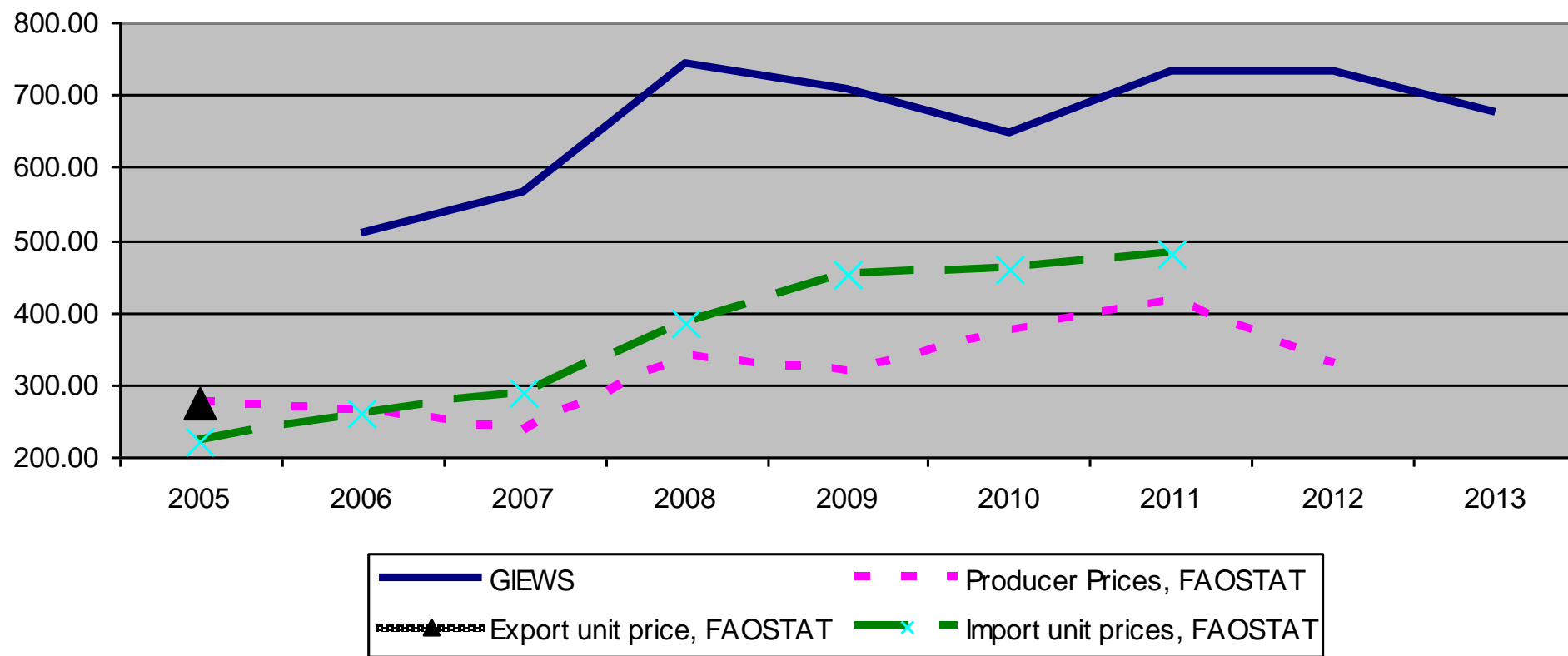
Integration examples: FAO historical price data series

Figure 3a Bangladesh, Rice, US\$/tonnes



Integration examples: FAO historical price data series

Figure 3d Mali, Bamako, Rice, US\$/tonnes



Recommendations for discussion

It is recommended that:

- FAO continue to explore ways to integrate its internal historical price statistics, including market prices, and disseminate price series for key commodities in FAOSTAT; and explore the development of new indicators to measure price transmission and volatility across the agro-food chain.
- FAO continue to collaborate with WFP and FEWSNET to examine opportunities for inter-agency price series integration and harmonization.

Question for discussion:

- Is there interest in price statistics workshops in the region? If so, what should be the focus and objective?



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Thank you/ Muchas gracias!

