Price analysis exercise

Presented at the Comesa training course on
"Food price variability: Causes, consequences, and policy options"
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Overview of exercise

- Copy price data for your country and world price data
- Deflate nominal prices to real prices using the change rate
- Calculate seasonal index
- Analyze price transmission between two prices
- Present results

Deflating prices

- Create new CPI by dividing old CPI by CPI of January 2008
- Divide two prices by the new CPI
- Graph nominal (original(and real (deflated) prices of each commodity over time (line graph)

Calculate seasonal index

- Calculate the ratio of current price to a 13 month moving average. Example: d12 = c12/average(c6:c18)
- Calculate seasonal index for January by averaging all January ratios
- Copy to 11 cells below to calculate the seasonal indexes for other months
- Graph seasonal index
- Calculate ratio of highest to lowest index

Analyze price transmission

Option 1: World to domestic transmission

- Convert a local price to US$ using exchange rate
- Calculate correlation coefficient with =correl(range1,range2)
- Graph local and international price over time (line graph)
- Graph local against international price (XY scatter)
- Add regression equation
- Calculate first difference of two prices
- Graph first difference of local and international price
- Add regression equation

Analyze price transmission

Option 2: Between two domestic prices

- Remove seasonality from two real prices by dividing by seasonal index
- Calculate correlation coefficient of resulting prices with =correl(range1,range2)
- Graph two local prices against time (line graph)
- Graph one price against the other (XY scatter)
- Add regression equation
- Calculate first difference of two prices
- Graph first difference of local and international price
- Add regression equation

Present results to audience

Present and interpret

- Graph of nominal and real prices
- Graph of seasonal index and high-low ratio
- Graphs of two prices (over time and scatter plot)
- Interpret correlation coefficient and regression equation
- Graph of change in one price vs change in other
- Interpret regression equation