

Price Data

Original Dataset (Local only, Haiti removed)

Data Points: 263452

Date range: 2002-01-31 - 2017-12-31

Data Points for 3 Commodities in 3 Countries (Sorghum, Millet, Maize. Chad, Mauritania, Nigeria) : 62,461

| Country | Type | Min Price | Max Price | Mean Price | Min Date | Max Date |
|------------|---------|-----------|-----------|------------|------------|------------|
| Chad | Maize | 69.78 | 344.70 | 185.98 | 2002-01-31 | 2017-12-31 |
| Chad | Sorghum | 62.49 | 280.00 | 140.92 | 2002-01-31 | 2017-12-31 |
| Chad | Millet | 88.02 | 383.48 | 197.99 | 2002-01-31 | 2017-12-31 |
| Mauritania | Maize | 4.889 | 20.052 | 10.896 | 2003-10-31 | 2017-12-27 |
| Mauritania | Sorghum | 3.126 | 106.505 | 12.874 | 2002-01-31 | 2017-12-27 |
| Mauritania | Millet | 4.699 | 26.118 | 11.140 | 2009-03-31 | 2017-12-27 |
| Nigeria | Maize | 18.18 | 579.96 | 62.67 | 2003-10-29 | 2017-12-27 |
| Nigeria | Sorghum | 5.89 | 273.07 | 66.77 | 2004-10-27 | 2017-12-27 |
| Nigeria | Millet | 16.73 | 180.71 | 68.66 | 2004-10-27 | 2017-12-27 |

Super High Prices (seen in the next plot)

Mauritania Sorghum: One entry is an order of 10 above the prices around it but is preceded with a period of NA. Seems like it could easily be a typo (220, where the year before the values were in the 20s).

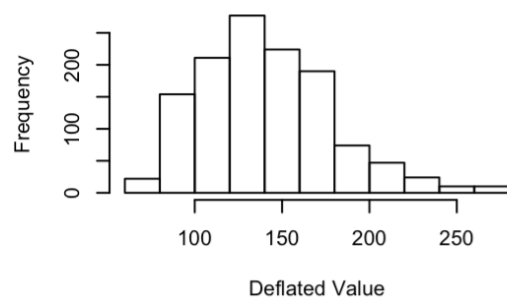
Nigeria Sorghum: The skew is because of the quantity of large values as opposed to one single high value (multiple entries > 200). Seems okay.

Nigeria Maize: One market for about a month (Octoberish 2012) had prices near 600. Multiple entries of the same value make me believe that this might be real

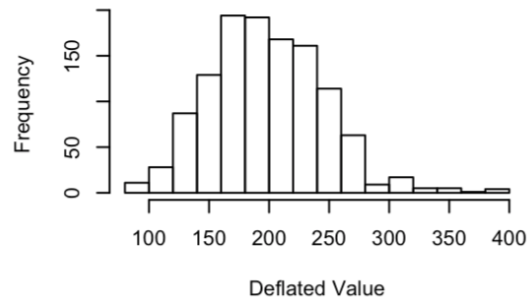
Distributions:

See next page

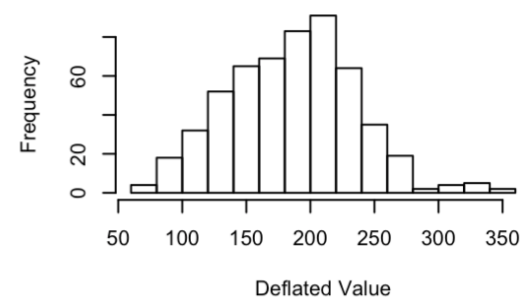
Chad : sorghum SD = 37.891



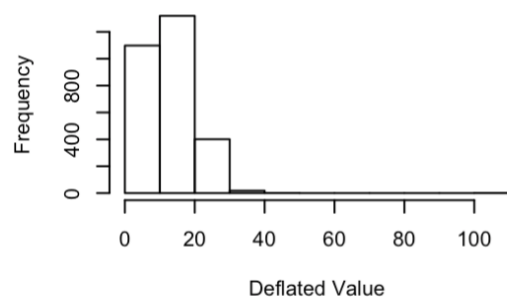
Chad : millet SD = 47.063



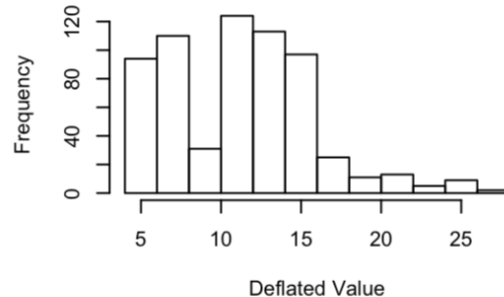
Chad : maize SD = 49.549



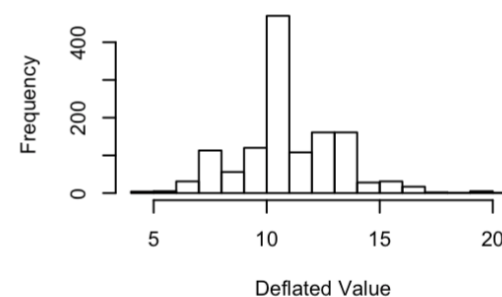
Mauritania : sorghum SD = 5.947



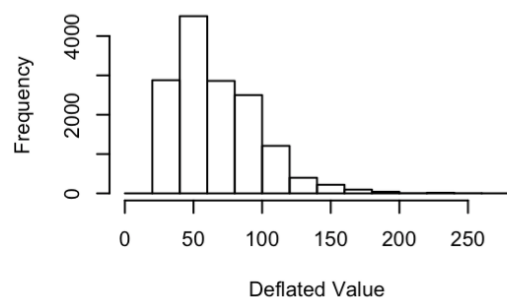
Mauritania : millet SD = 4.475



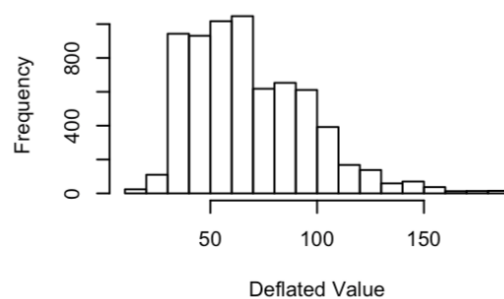
Mauritania : maize SD = 2.182



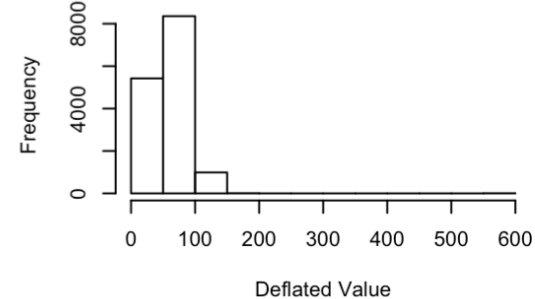
Nigeria : sorghum SD = 30.387



Nigeria : millet SD = 27.916



Nigeria : maize SD = 25.687



FEWS Reporting Bias:

Are the countries that only grow one type of commodity actually not growing the other three?

Djibouti only shows sorghum data in FEWS dataset, and FAO does not show either maize or millet data for this country.

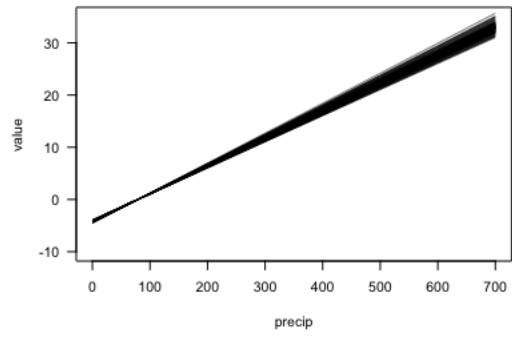
Angola & Malawi show Maize data in FEWS set, but no Sorghum or Millet. FAO numbers for 2017 state that they do produce the other two crops in smaller quantities:

| Main Code | Domain | Area Code | Area | Element Code | Element | Item Code | Item | Year Code | Year | Unit | Value | Flag | Flag Description |
|-----------|--------|-----------|----------|--------------|---------|-----------|---------|-----------|------|-------|-------|------|------------------|
| | Crops | 7 | Angola | 5419 | Yield | 56 | Maize | 2017 | 2017 | hg/ha | 10573 | Fc | Calculated data |
| | Crops | 7 | Angola | 5419 | Yield | 79 | Millet | 2017 | 2017 | hg/ha | 2593 | Fc | Calculated data |
| | Crops | 7 | Angola | 5419 | Yield | 83 | Sorghum | 2017 | 2017 | hg/ha | 2272 | Fc | Calculated data |
| | Crops | 72 | Djibouti | 5419 | Yield | 56 | Maize | 2017 | 2017 | hg/ha | 19350 | Fc | Calculated data |
| | Crops | 130 | Malawi | 5419 | Yield | 56 | Maize | 2017 | 2017 | hg/ha | 20078 | Fc | Calculated data |
| | Crops | 130 | Malawi | 5419 | Yield | 79 | Millet | 2017 | 2017 | hg/ha | 6340 | Fc | Calculated data |
| | Crops | 130 | Malawi | 5419 | Yield | 83 | Sorghum | 2017 | 2017 | hg/ha | 8696 | Fc | Calculated data |

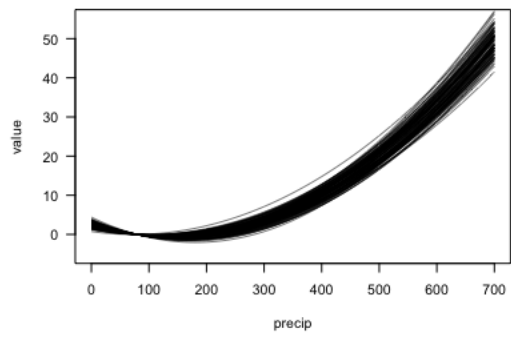
Commodity price responses

Sorghum

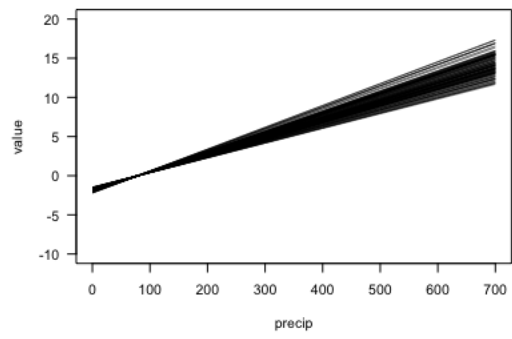
Sowing (Linear)



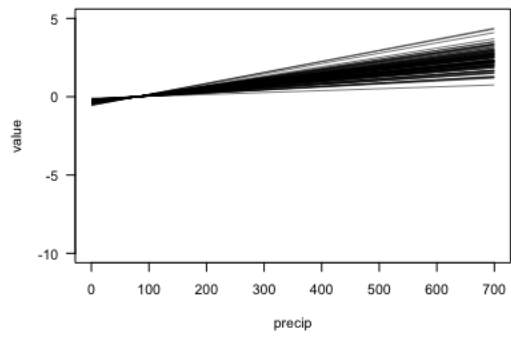
Growing (Quadratic)



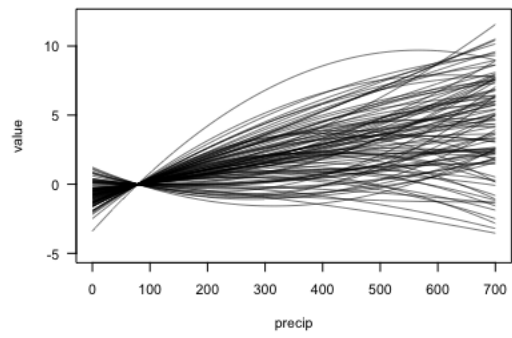
Harvest (Linear)



Supply Chain (Linear)

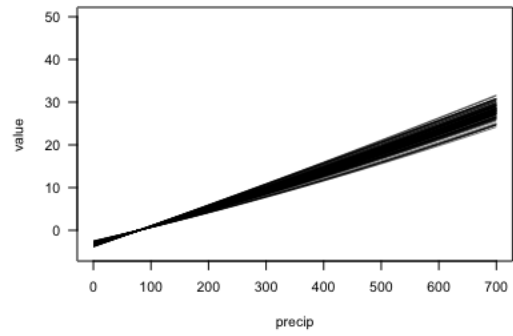


One Month Prior to Sale (Quadratic)

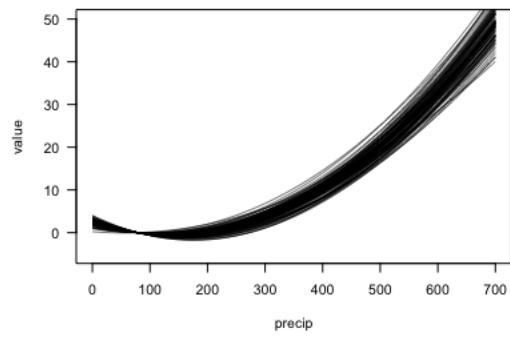


Millet

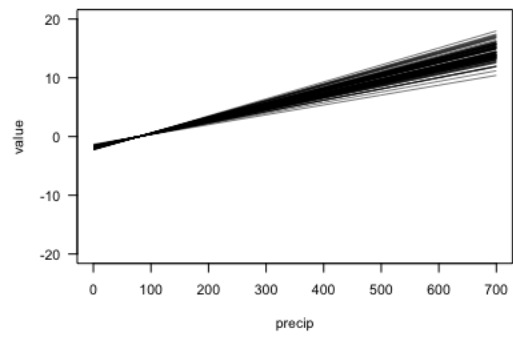
Sowing (Quadratic)



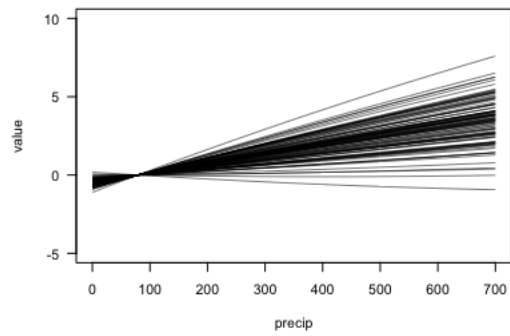
Growing (Quadratic)



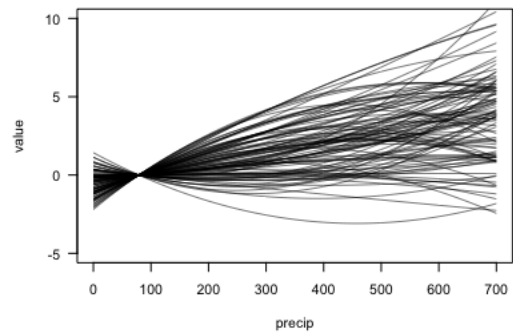
Harvest (Linear)



Supply Chain (Quadratic)

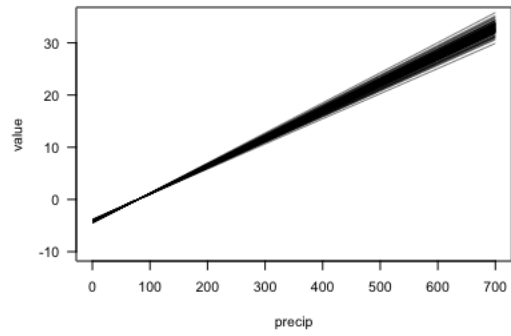


One Month Prior to Sale (Quadratic)

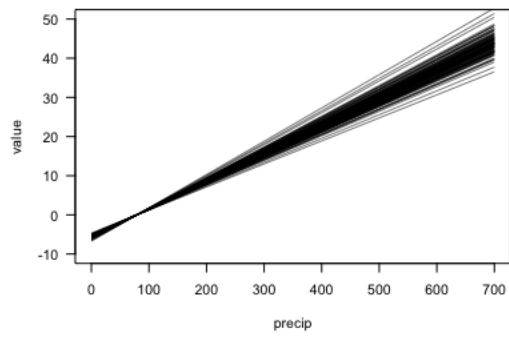


Maize

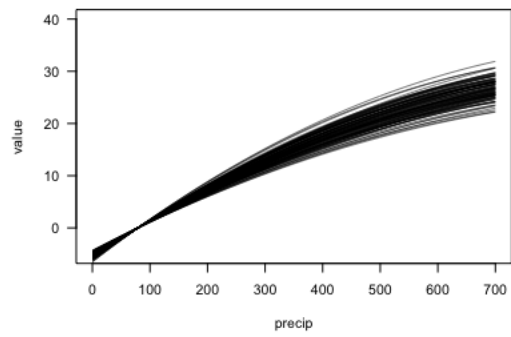
Sowing (Quadratic)



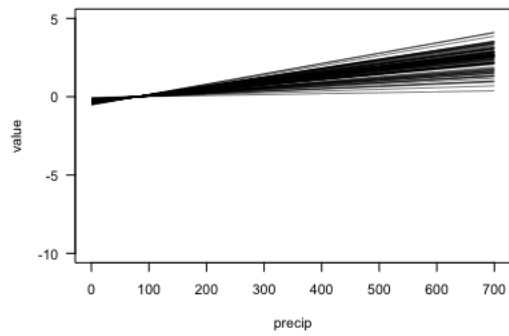
Growing (Quadratic)



Harvest (Linear)



Supply Chain (Quadratic)



One Month Prior to Sale (Quadratic)

