Tool: Analysing price changes

### Purpose of the tool

This tool will help you identify the causes of any significant price change you identify when monitoring prices.

### How to use the tool

This tool consists of a checklist to be used in price data analysis in order to identify potential causes of price change. It goes through the most common causes for price change:

* Inflation
* Seasonality
* Common patterns across markets
* Impact of the project

### Checklist to identify potential causes of price change

If you have identified a price difference of 30 per cent from one month to the next, you should check for its potential causes.

## 1. Inflation

If the price has risen, check if the rise is specific to the commodity(ies) you are monitoring or can be associated with general inflation.

You can use the Consumer Price Index (CPI)[[1]](#footnote-1) as the measure of inflation.

* Plot the data series for the CPI.
* Plot the price data series for the commodity(ies) you are monitoring.
* Compare the two graphs.
  + If both follow the same pattern (as for commodity 1), it is likely that the change of prices that you have observed reflects general inflation.



* + If they follow different patterns (as for commodity 2), you should investigate further to understand why. The cause is probably related to a shock that is specific to the commo­dity and might be related to the project.



## 2. Seasonality

Check if the price change is specific to the commodity(ies) you are monitoring or can be associated with seasonality.

You can use historical price series for the commodity(ies) that you are monitoring. They may be avail­able from secondary data sources (refer to Tool 3.1). As an alternative, you can use seasonal calen­dars developed during market assessments.

If you are using historical price series:

* Plot the historical price data series.
* Plot the price data series for the commodity that you are monitoring.
* Compare the two graphs.
  + If both follow the same pattern (as for project area 1), it is likely that the change of prices that you have observed reflects seasonality.



* + If they follow different patterns (as for project area 2), you have to investigate fur­ther to understand why. The cause is probably related to an unpredicted shock and might be related to the project



## 3. Patterns across markets

Check if the price change is specific to the commodity(ies) you are monitoring or can be associated with patterns of price change across markets.

You can use price data for the commodity you are monitoring in different marketplaces.

* Plot the price data over time for each market in the same graph.
* Compare the lines for the different markets.
  + If they follow the same pattern, it is likely that the change of prices that you have observed reflects a common pattern across markets, and the problem is generalized.
  + If they follow different patterns, you have to investigate further to understand why. The cause is probably localized and might be related to the project.



## 4. Impact of the project

If you have found that the observed change of prices might be related to the project, you should investigate the nature (demand, supply, market competition etc.) and causes of the problem. In order to do so, it is recommended that you conduct interviews with key informants to cross check the data.

### Selecting key informants

* Identify in which market(s) the price changes are happening.
  + If they happen in one market location: interview local traders.
  + If they happen across markets: interview wholesalers, market or government officials.

### Checklist for interviews

* Refer to MAG Tools 1.6 (interviews with traders), focusing on how the project may have impacted:
  + Traders’ costs (transport, storage, leakages)
  + Availability of commodities
  + Traders’ volumes
  + Market structure (number of traders operating, type and quality of products, etc.)
  + Level of demand
  + Infrastructure, services and external factors

1. The most common way to calculate the inflation rate is by price indices. One of the most popular is the Consumer Price Index (CPI). It measures the price of a selection (basket) of goods and services for a typical consumer over time. You will find data on the CPI for most of the countries on the World Bank database at <http://data.worldbank.org/indicator/FP.CPI.TOTL.ZG>. More specific and up-to-date information can be available at the local statistical bureau at country level. [↑](#footnote-ref-1)