Appendix: `total_trade_CPC` module

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This module aggregates total trade flow by reporting country for partners countries to a single total trade for each unique CPC commodity code. The module saves the output into the dataset `total\_trade\_cpc\_m49`, within the `trade` domain.

Parameters

- `year`: year for processing.

Import Data from Complete TF CPC

Import monetary values and quantities from data previously generated by the `complete_tf_cpc` module.

The query is done for all reporters, all partners, all elements (indicated below), all items, and the year set in `year`.

1. `5608`: Import Quantity (heads)
2. `5609`: Import Quantity (1000 heads)
3. `5610`: Import Quantity (tonnes)
4. `5908`: Export Quantity (heads)
5. `5909`: Export Quantity (1000 heads)
6. `5910`: Export Quantity (tonnes)
7. `5622`: Imports (1,000 US$)
8. `5922`: Exports (1,000 US$)

Aggregate values across partner dimension

Bilateral trade data (from the `complete_tf_cpc` module) for each reporter/flow/year/item combination is aggregated for all partners.

Note that:

- missing values are ignored in the aggregation (i.e., set to zero)
- the aggregation of flags is done using the `flagWeightTable` from the `faoswsFlag` package.

Calculate Unit Values

Calculate unit value (US$ per quantity unit) at CPC level if the quantity is greater than zero (if the quantity happens to be equal to zero, the unit value is set to NA).

- use `flagObservationsStatus` from quantity measures
- set `flagMethod` to `i` for unit values (calculated as identity)

The created elements are:

- `5630`: Import Unit Value (US$ / tonne)
- `5638`: Import Unit Value (US$ / heads)
- `5639`: Import Unit Value (US$ / 1000 heads)
- `5930`: Export Unit Value (US$ / tonne)
- `5938`: Export Unit Value (US$ / heads)
- `5939`: Export Unit Value (US$ / 1000 heads)

Remove "non-existent" transactions

It can happen that a given observation was generated by a previous run of the module, but in a subsequent run it is not generated. This happens mainly because bug-fixes were introduced so that an observation that should not have existed is, correctly, not generated by a fixed version of the module. If no overwrite of the observation that should not exist happens, then it lives in the dataset "forever". Thus, the latest version of the data is downloaded, it is checked which observations are not generated by the current run of the module (considered the most correct version), and all observations that were previously saved in the dataset but are not in the current output are set to NA. This increases the computation time of the module (it needs to download the complete trade dataset), but guarantees that data that should not exist is not saved in the dataset. # Remove "protected" data from the module's output.

Combinations of dimensions that correspond to "protected" data are removed from the module output as these should not overwrite the data already in SWS.

Save data

Saved data will be available in the "Total Trade (CPC)" dataset (`total_trade_cpc_m49`) of the `trade` domain.