Trade2

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Initial validation of trade data

At prevalidation step we are to make a decision should we accept data from a specific country for the further processing or not. A country could provide data of good quality for one part of commodities and inadequate level of quality for another part. We want to estimate quality differences between commodities of a country.

Quality of data is estimated by following indicators:

- Share per cent of missing quantities
- Share per cent of unit value outliers

Self-trade

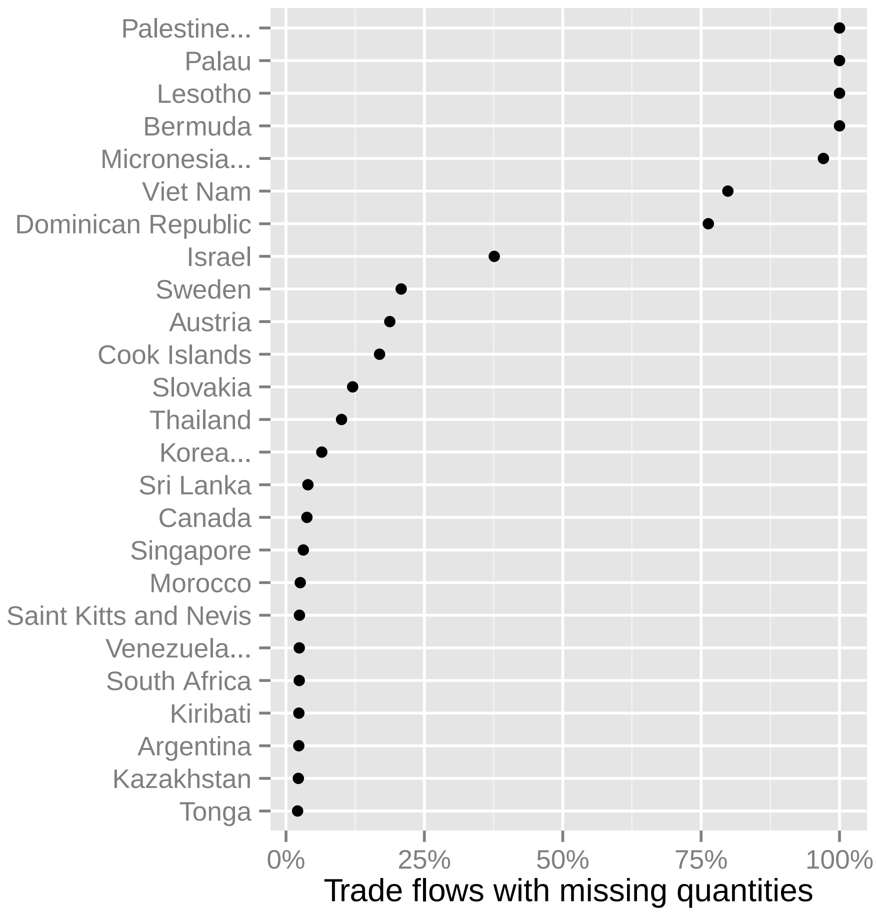
There are cases when a country reports itself as a partner to exports or imports. Such situations can occur due to mistakes or when an entrepôt exists.

Table 1: Self-trade of commodities from 2nd, 10th and 15th HS chapters in 2011

Reporter	Flow	Total
France	Import	163
Canada	Import	56
Portugal	Import	50
Slovakia	Import	50
New Zealand	Import	31
South Africa	Import	27
United Kingdom	Import	17
Slovenia	Import	16
Estonia	Import	12
Thailand	Import	12
China	Import	7
Greenland	Import	3
Ethiopia	Import	2
Papua New Guinea	Import	2
Saint Kitts and Nevis	Import	2
Indonesia	Import	1
Malaysia	Import	1
Palau	Import	1

Missing indicators

We identify which reporters provide data of insufficient quality. Firstly for every reporter proportion of trade flows with missing quantity is calculated.

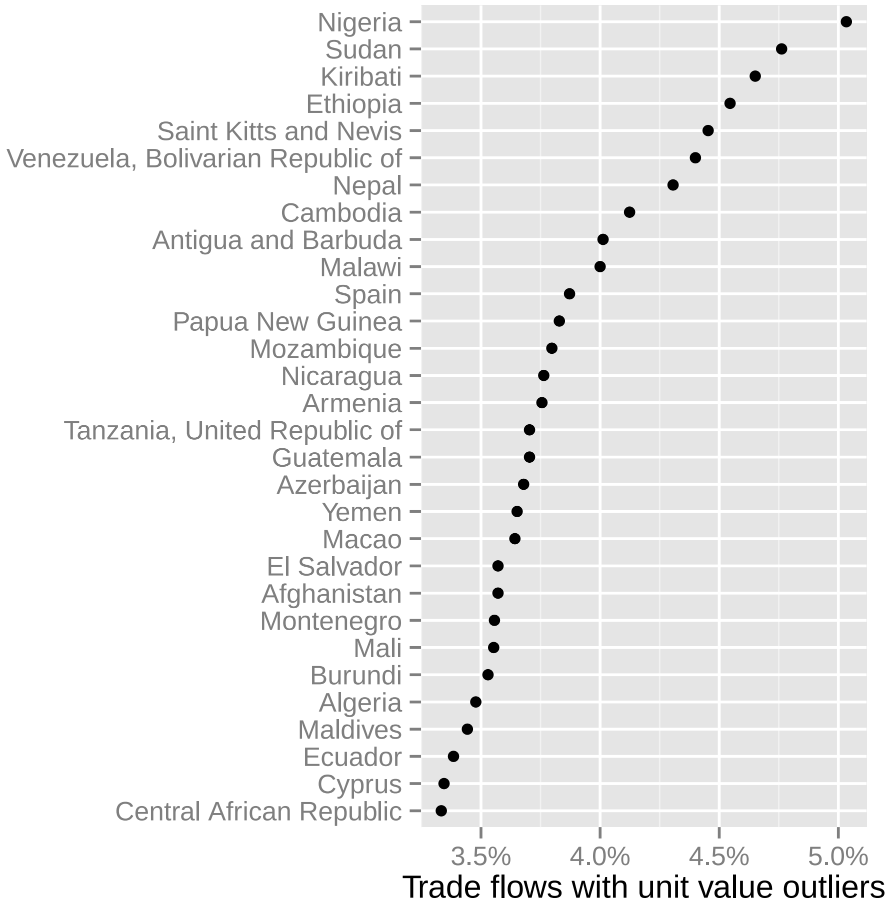


Detection of outliers

We define outliers as observations located outside the range:

$$[Q_1 - k(Q_3 - Q_1), Q_3 + k(Q_3 - Q_1)]$$

where Q_1 and Q_3 are the lower and upper quartiles respectively, and k is a nonnegative constant. In this paper we use k equals 1.5.



Imputing of missing quantities and replacement of outliers