April 2021 TUV update
Release Notes

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April 30, 2021

1 What's new?

1.1 Conversion across revisions of the HS

When constructing TUV, we need to convert trade flows originally expressed in various revisions of the Harmonized System (HS) into one single revision that is common to the whole final dataset. The UNSD proposes two methods to perform such conversions: either all the ancient codes associated to a given recent code are retained (m to m matching), or the more recent codes are linked to one single ancient code, which corresponds to the most likely equivalent (m to 1 matching). The UNSD provides the result of the first method in its "correlation tables", and of the second in its "conversion tables".

Previous versions of TUV relied solely on the correlation tables. However, when dealing with flows originally reported in the 2017 revision of the HS, the use of correlation tables had the unfortunate side effect of artificially creating an abnormally large number of trade flows. These trade flows appeared in the latest years of TUV because, for instance, a given product code in the 2017 revision of the HS (HS17) was associated to many products in the 1996 revision (HS96), and each of these many products appeared in TUV, with a unit value derived from the unit value of the HS17 code. For instance, the HS17 code 854231 ("*Electronic integrated circuits: processors and controllers, whether or not combined with memories, converters, logic circuits, amplifiers, clock and timing circuits, or other circuits*") was associated with 182 HS96 codes. In other words, as soon as a country reported trade flows with this HS17 code, 182 trade flows were created when converting from the original revision to the 1996 revision of the HS.

There is no perfect solution to these conversion issues. They can however be alleviated by the use of the "conversion tables", i.e. by associating each HS17 code to a single, most likely equivalent in HS96. In the previous example , instead of 182 potential matches, the HS17 854231 is associated to the HS96 code 854213, "*Electronic circuits: monolithic, integrated, digital, metal oxide semiconductors (MOS technology)*". Therefore, to construct the April 2021 version of TUV, we downloaded the UNSD correspondence datasets and used the conversion tables to go from the 2017 revision to other revisions, and the correlation tables for the rest of the conversions.

An important caveat is that using the conversion tables to reduce the number of "artificial" trade flows comes at a cost: we are losing some information, since we are constraining each recent product code to be associated with one single ancient product code, even in cases where the more recent product code results from the merge of several ancient products codes.

1.2 New HS revisions available

TUV used to be available only in HS96 and HS02. It is now also proposed in HS07 and HS12.

1.3   Modification of some geographic entities

We switched to the standard ISO codes. Therefore, the code for Belgium is now 56, it was 58 in the previous version. The code for South Africa was 711, it is now 710.

1.4   Information on the revision used by the reporter

A last modification to the programs was made to accomodate the new structure of the raw tariff line data provided by Comtrade: in previous versions, the tariff lines mentionned the revision used by the reporter. This is not the case in the new version, which was used for flows taking place from 2015 to 2019. We therefore had to rely on the commercial Comtrade data, using the "as reported" datasets to extract the revision used by each reporter in a given year. This modification to the programs does not involve any changes to the final TUV dataset.

2   Comparison of descriptive statistics

We present below some descriptive statistics to assess the changes between the current and the previous version of TUV.

Figure 1: Number of observations (reporter-partner-product)
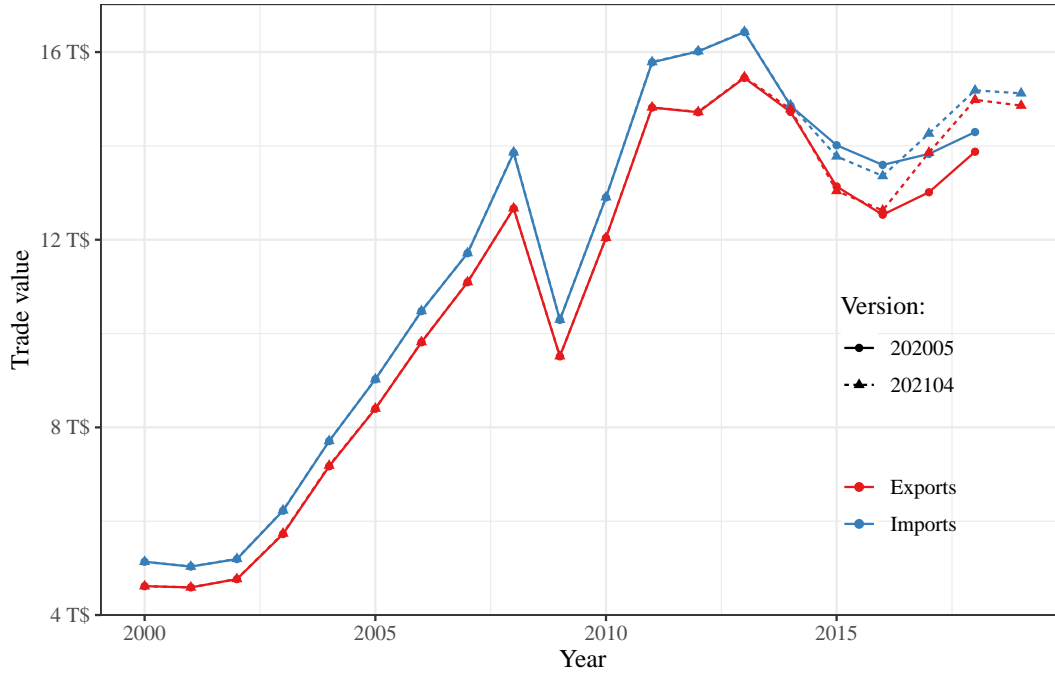
(a) HS1996
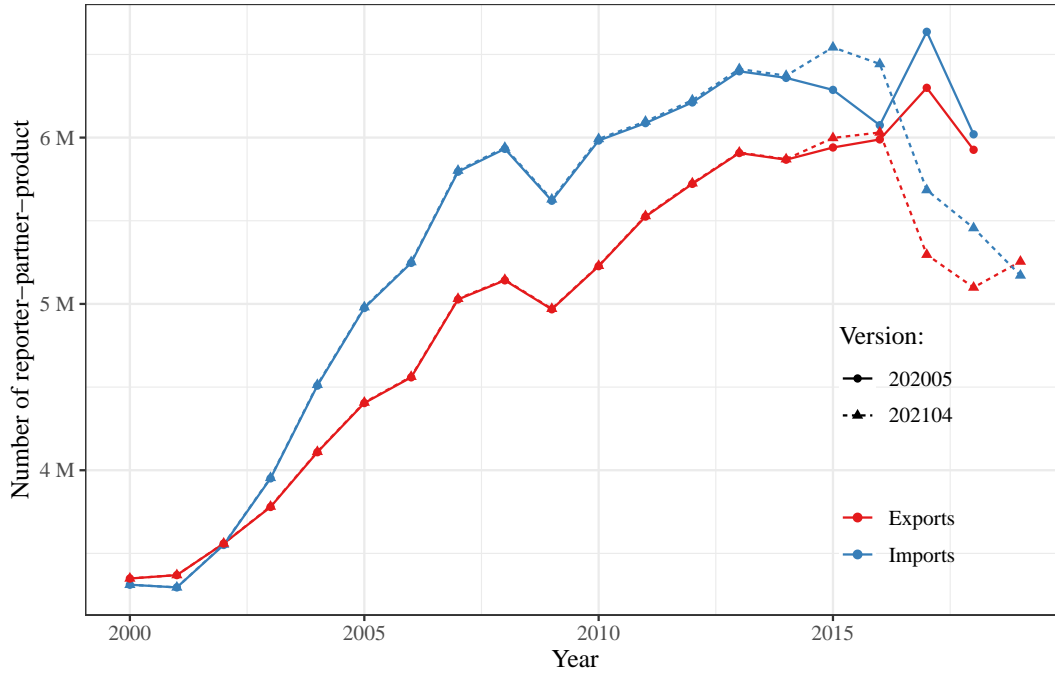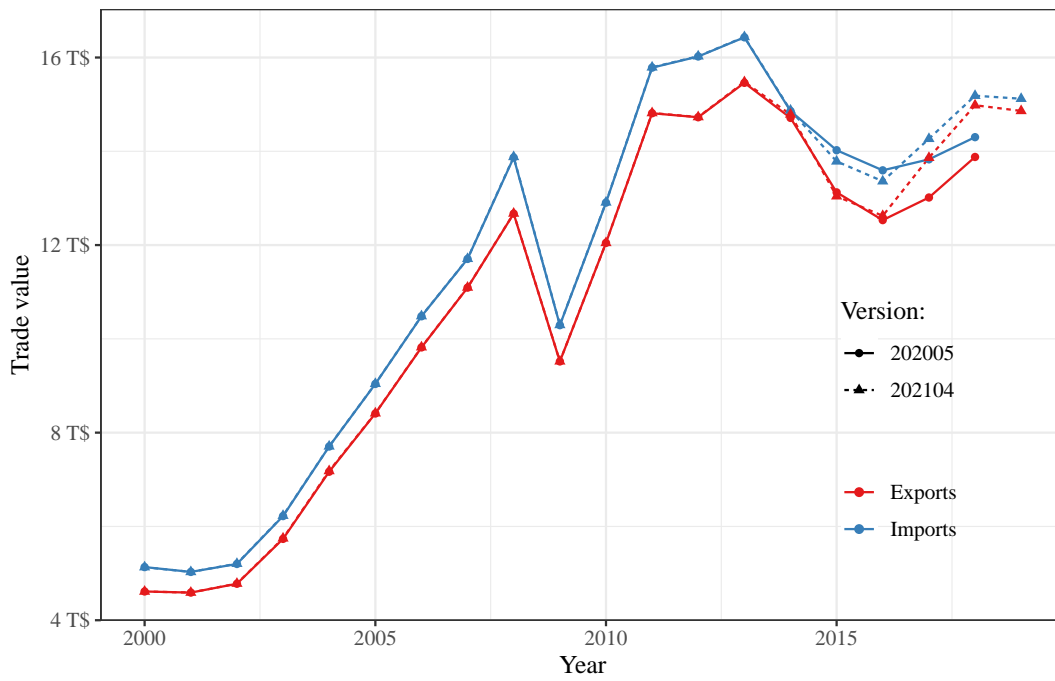
(b) HS2002
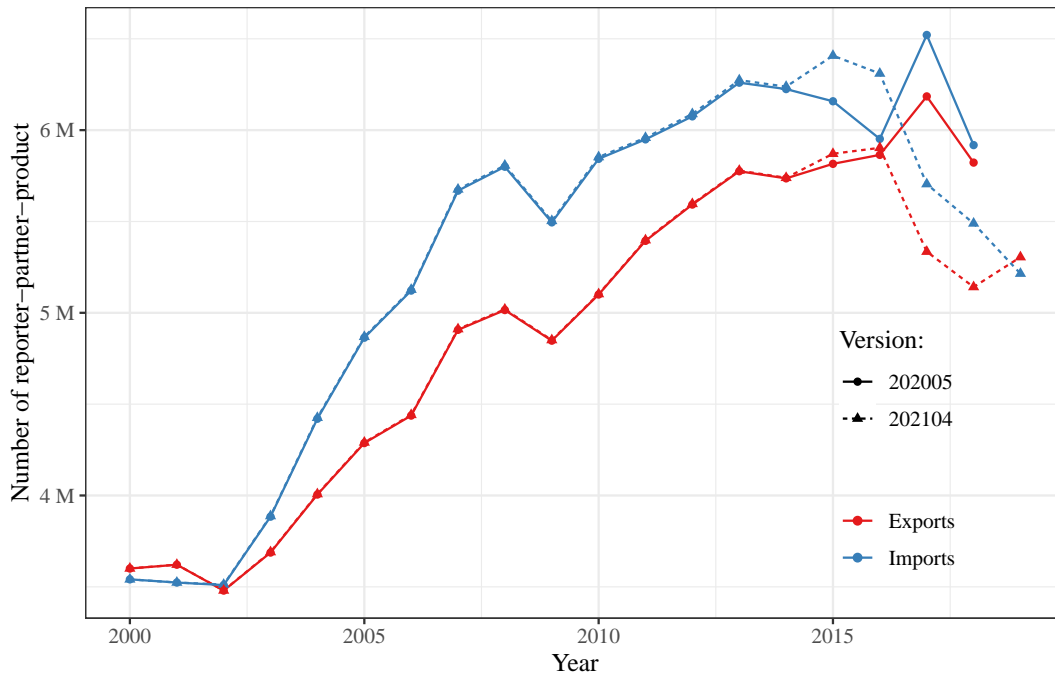
Figure 2: Total trade value
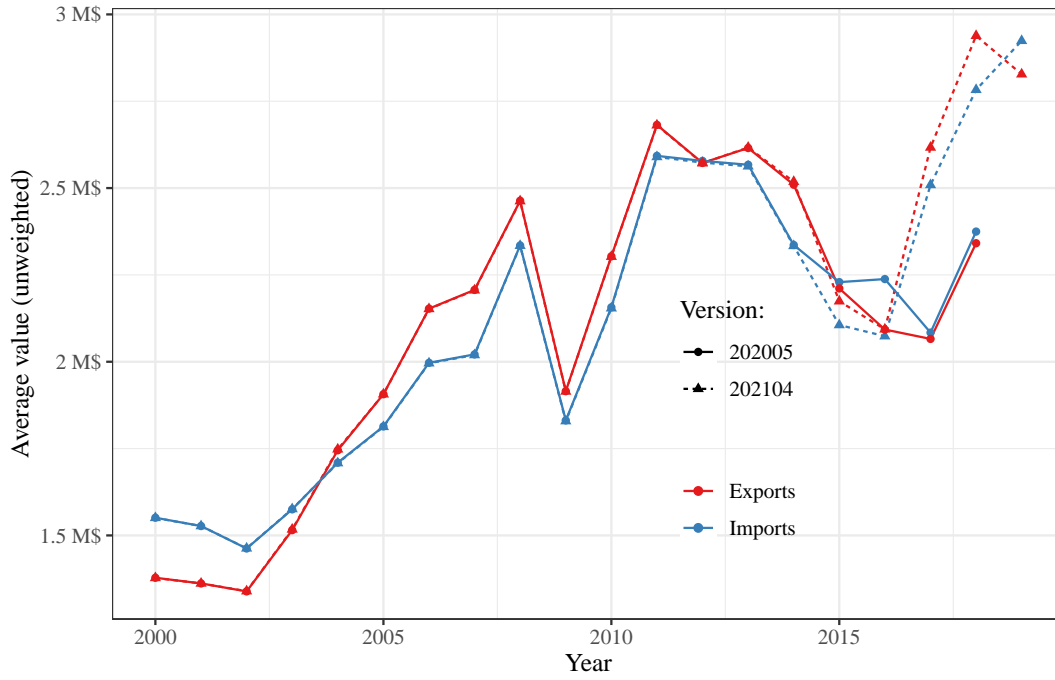
(a) HS1996

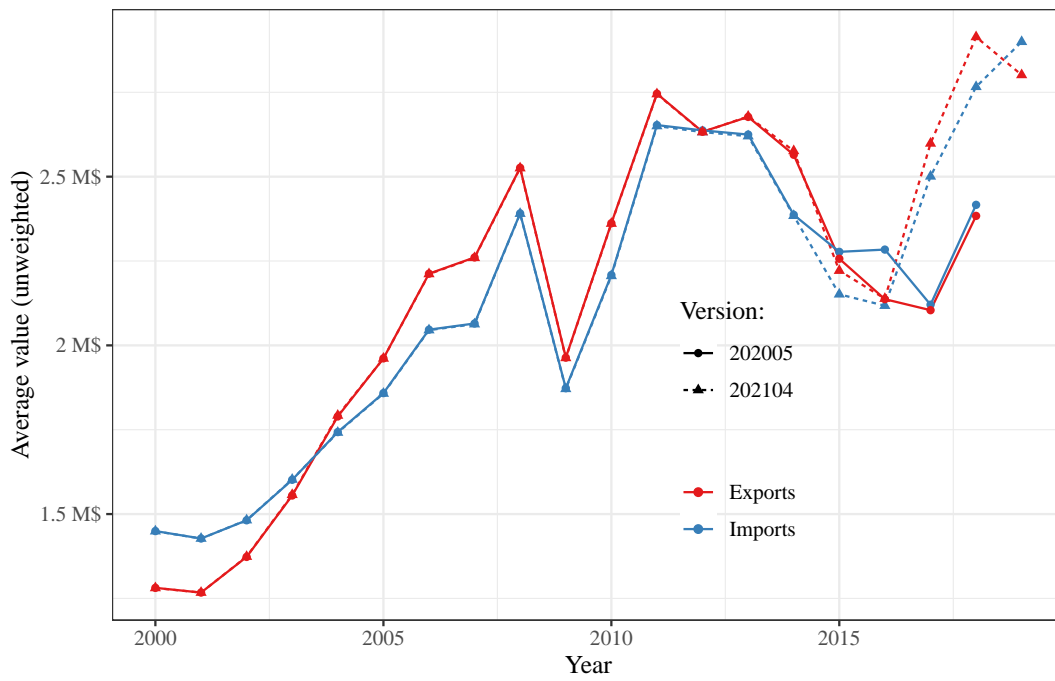(b) HS2002

Figure 3: Average value (unweighted)
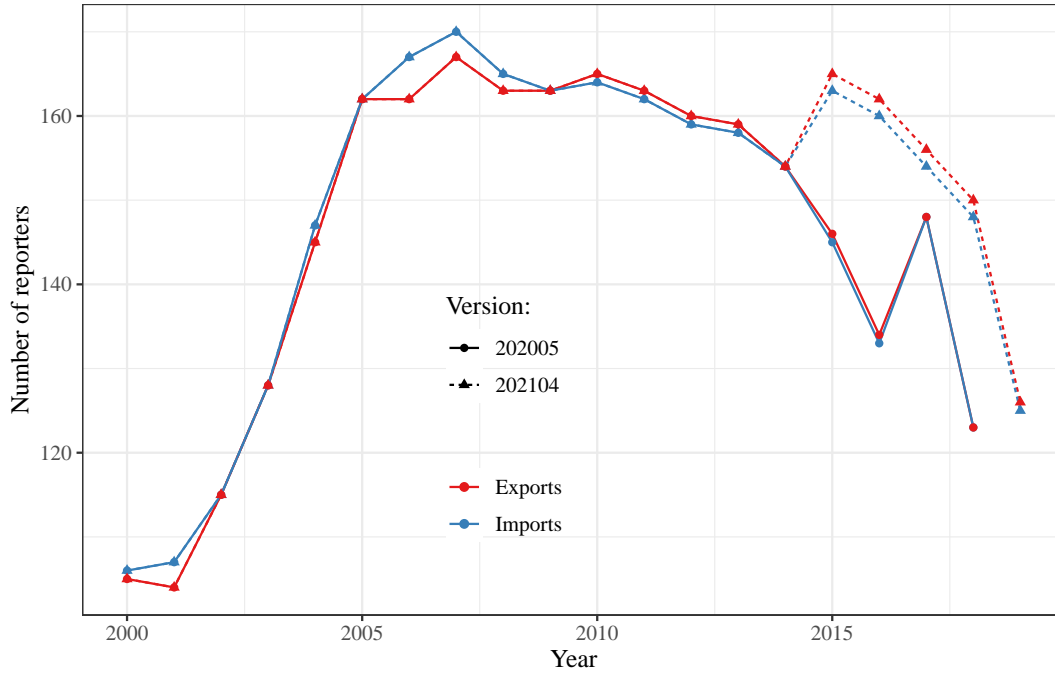
(a) HS1996

(b) HS2002

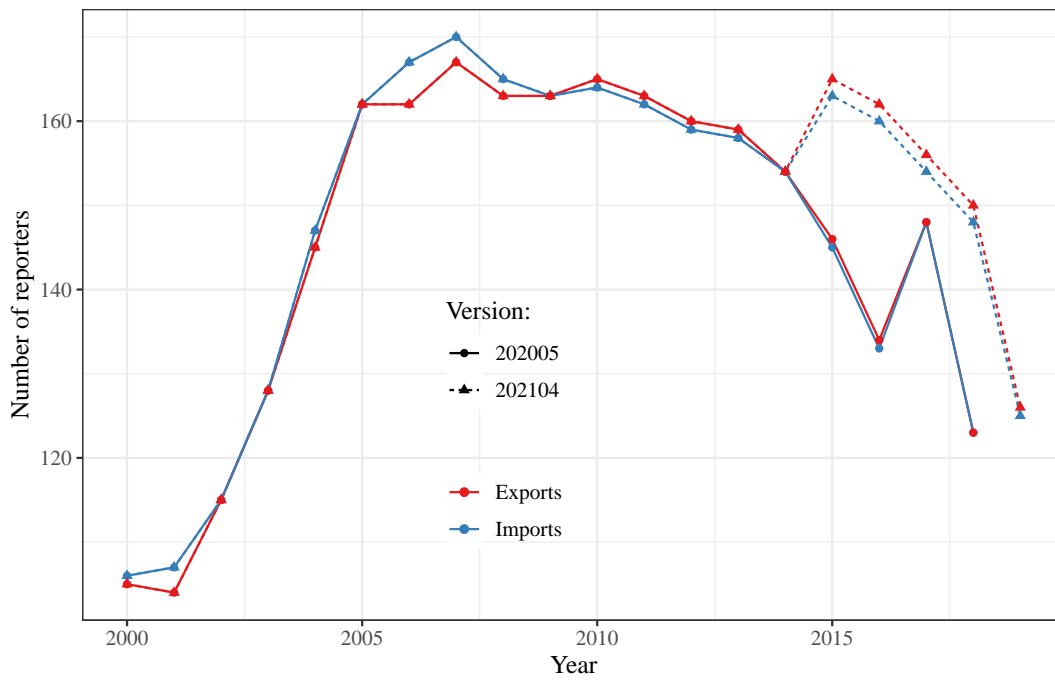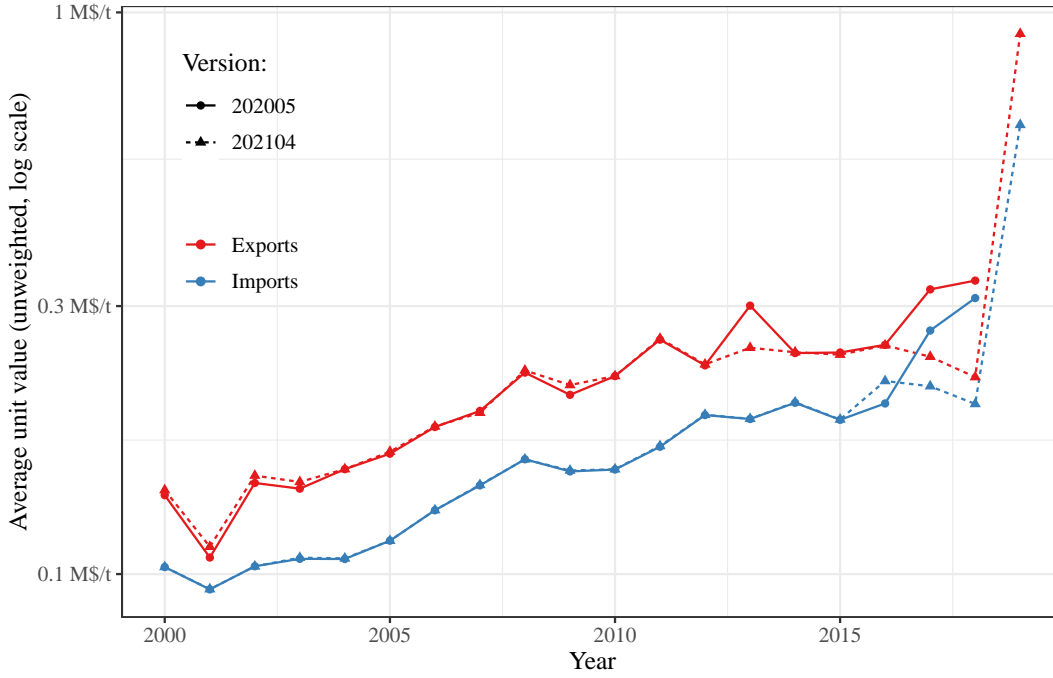Figure 4: Number of reporting countries

(a) HS1996

(b) HS2002

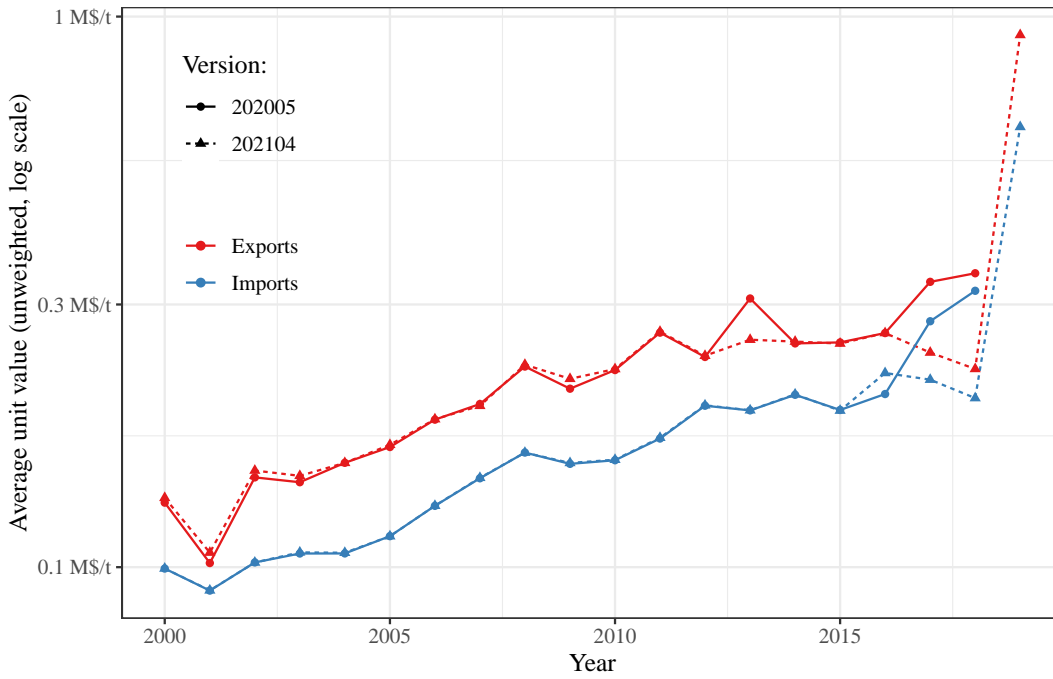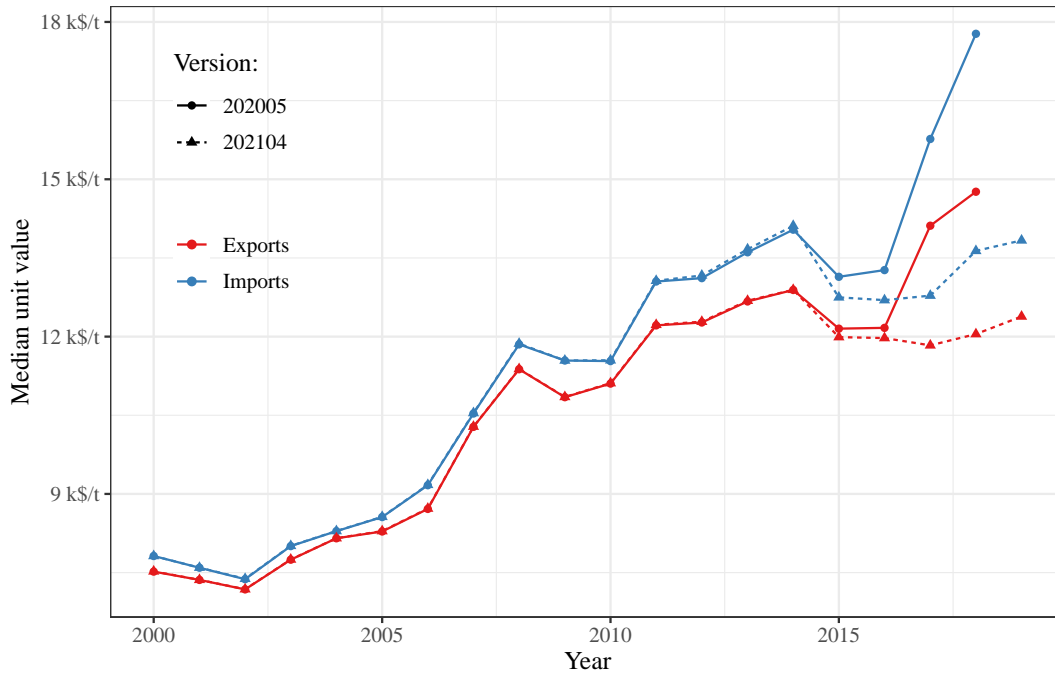Figure 5: Average unit value (unweighted)

(a) HS1996

(b) HS2002

Figure 6: Median unit value (unweighted)

(a) HS1996

(b) HS2002