



Distinguishing between imports for domestic use and for re-exports: A novel method illustrated for the Netherlands

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Problem: re-exports obscure dependencies

Focus of this presentation: import side

Use of imports – for **domestic production/consumption** or to sell immediately to other countries (**re-exports**). For example, Chinese laptops imported by Dutch merchants and sold to the European hinterland via the harbour of Rotterdam.

Which share of imports from a trade partner is used in the domestic economy? Accurate numbers are necessary to say something about economic dependencies between countries.



Relevant for the Netherlands

- In 2015, re-exports are 54% of exports of goods
- Value added of these re-exports is 4% of Dutch GDP
- Value added of 1 euro re-exports is 11 cents
- Value added of 1 euro “made in Holland” is 57 cents

For exports: which countries buy Dutch products?

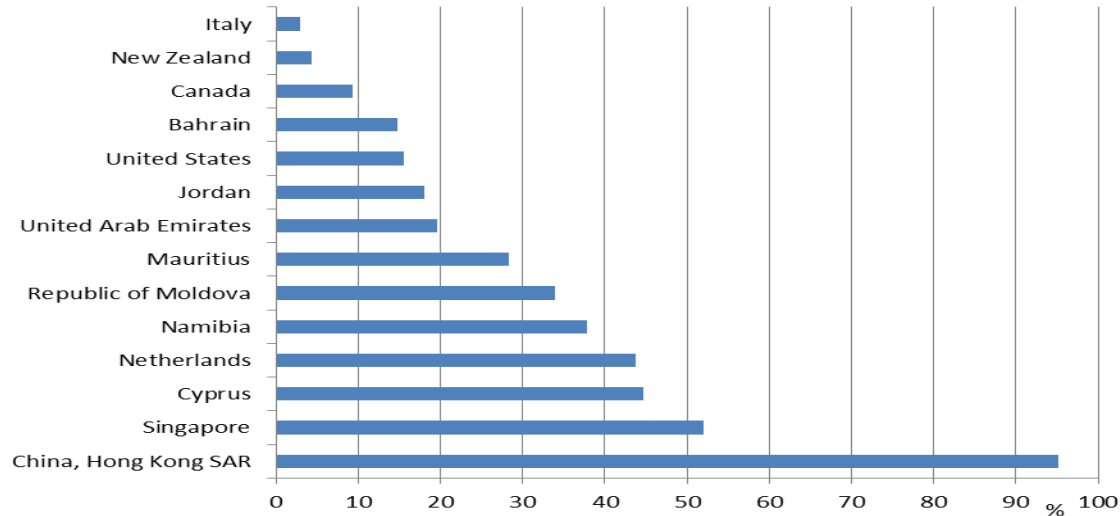
For imports: who supplies Dutch producers and consumers?

To quantify the dependencies, it is necessary to quantify re-export flows by country (IMF & OECD 2018, OECD 2019)



And relevant for many other countries too

Re-exported commodities as share of total exports of commodities, 2016



Source: UNCTAD, Singapore Department of Statistics, Statistics Netherlands

Countries such as Lithuania, Germany and Belgium have sizable re-exports as well and share of re-exports in total exports is growing (Notten, 2015)



Goal: improve existing rough estimates

Describe a method that for imports from country x , divides these imports into imports for domestic use/production and imports destined for re-exports

- Capitalise on existing micro data
- Illustrate the method with data from Statistics Netherlands
- Other countries should be able to use the same method



Data, input

On level of the trader (example starts with VAT numbers)

- Value of imports, by country x commodity
- Value of re-exports by commodity (not by country)

From National Accounts (NA)

- Value of imports needed for 1 euro of re-exports, at commodity level
- Value of imports and re-exports, by commodity
- Key to match product codes trade statistics with NA



Data, output

- Year (2002-2016)
- Country of imports
- Commodity code (8-digit Combined Nomenclature)

For the combination of year x country x commodity code:

- Value of Dutch imports for domestic use
- Value of Dutch imports for re-exports



Method without micro data: proportional

If $x\%$ of imports of a product are destined for re-exports, then $x\%$ imports of this product from each country is destined for re-exports. Same percentage for Belgium, Germany China, USA and so on.

No heterogeneity at country level (for this product) at all.

Method using micro data, main idea

Consider a trader who re-exports a product

From which countries does the trader import this product?

Assign imports for re-exports proportionally.

When imports of a trader do not account for all its re-exports, use data from other importers for the remaining part

Capitalise on existing data; method is feasible for all countries with micro data



Method using micro data, preparing data

Match data from international trade in goods statistics (ITG) and national accounts (NA)

- Remove trade flows from ITG that NA treats differently (processing trade, returned goods)
- Remove trade from NA that is not in ITG (production abroad, illegal drugs)
- Weigh ITG at product level to NA



Method using micro data, numerical example

Re-exports at trader level, detailed product level

VAT number	Re-exports	M per euro Re-exp	Necessary imports
123	100	0.9	90
456	1000	0.9	900

Imports at trader level, detailed product level

VAT number	Imports	Country of imports
123	1000	Germany
456	300	Belgium
456	200	France

Method using micro data, numerical example

Step 1. Assign imports for re-exports at VAT number, at most detailed product level, using a proportionality assumption

VAT number	Necessary imports	Imports	Country of imports	M for re-exports	Imports remaining	Imports still necessary
123	900	1000	Germany	90	910	0
456	900	300	Belgium	300	0	400
456		200	France	200	0	

Method using micro data, numerical example

In the paper, tackle remaining exports in subsequent steps:

2. Try to assign imports at VAT number x 6 digit commodity
3. Try to assign imports at enterprise-level x 6 digit commodity
4. Try to assign imports at enterprise group-level x 6 digit commodity
5. Try to assign imports at enterprise group-level x commodities national accounts

Skip this for now



Method using micro data, numerical example

400 of imports by VAT number 123 are used to account for imports necessary for re-exports by VAT number 456

Total:

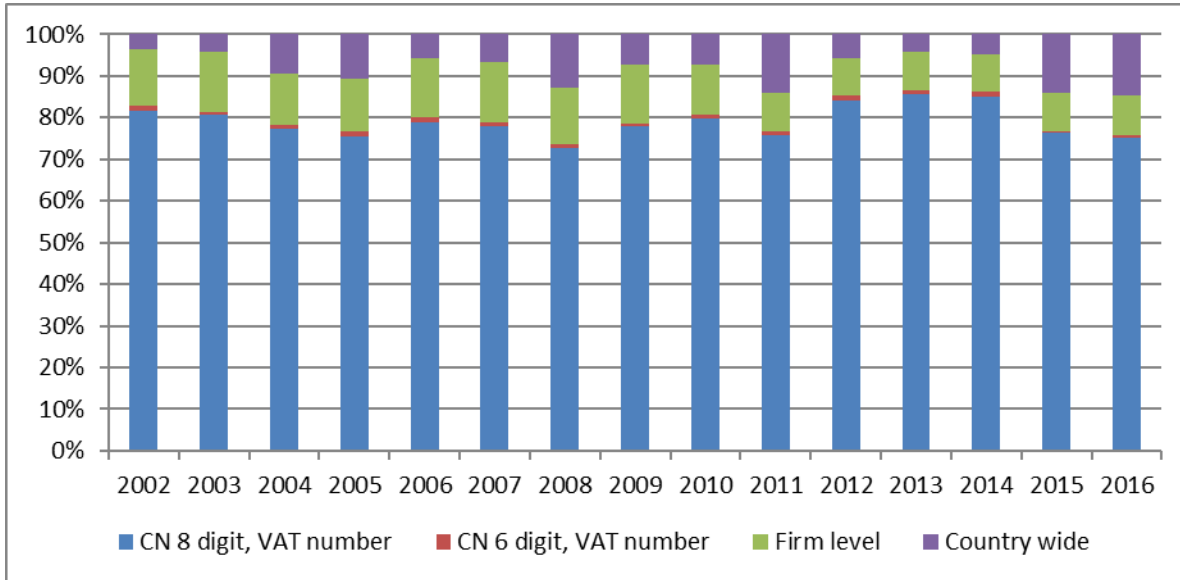
490 out of 1000 imports from Germany used for re-exports

300 out of 300 imports from Belgium used for re-exports

200 out of 200 imports from France used for re-exports

Assigning imports is mostly at trader level

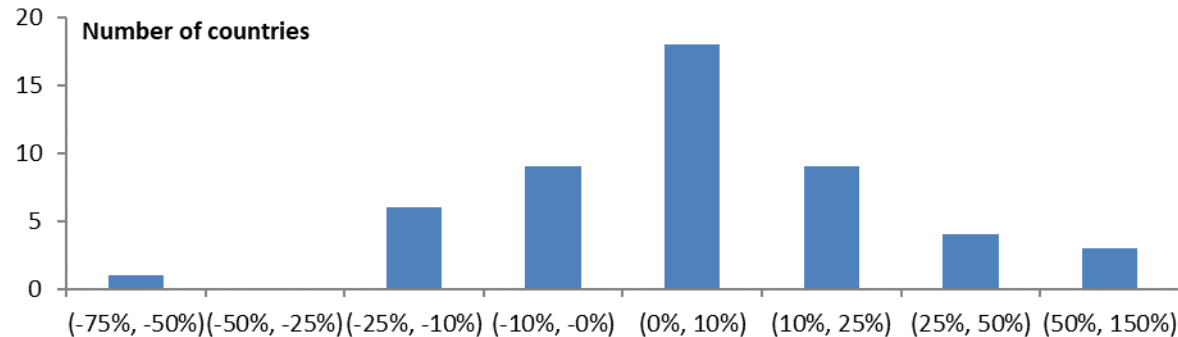
Source information to determine imports as imports for re-exports, total



Much better results for non-EU countries than for EU-countries (shown in paper)

Results - proportional and new method yield substantially different results

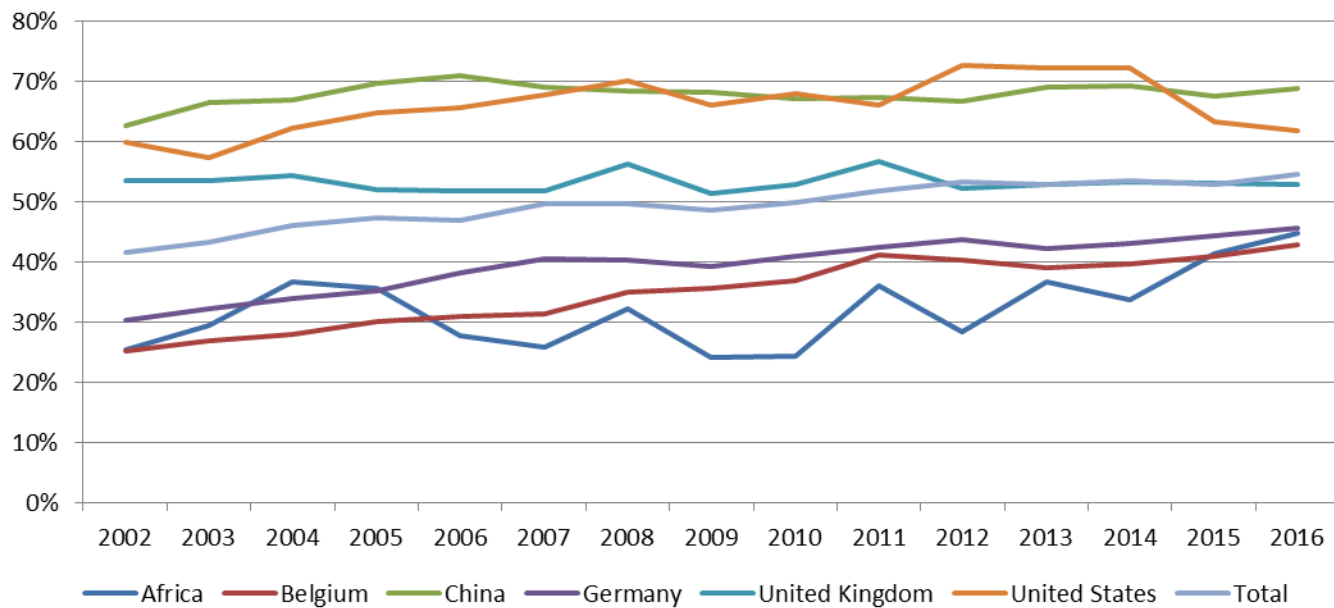
Relative difference between estimates for value of imports for domestic use, proportional and micro method, top 50 Dutch trading partners, 2016



For 8 out of 50 countries, the difference is more than 25%.

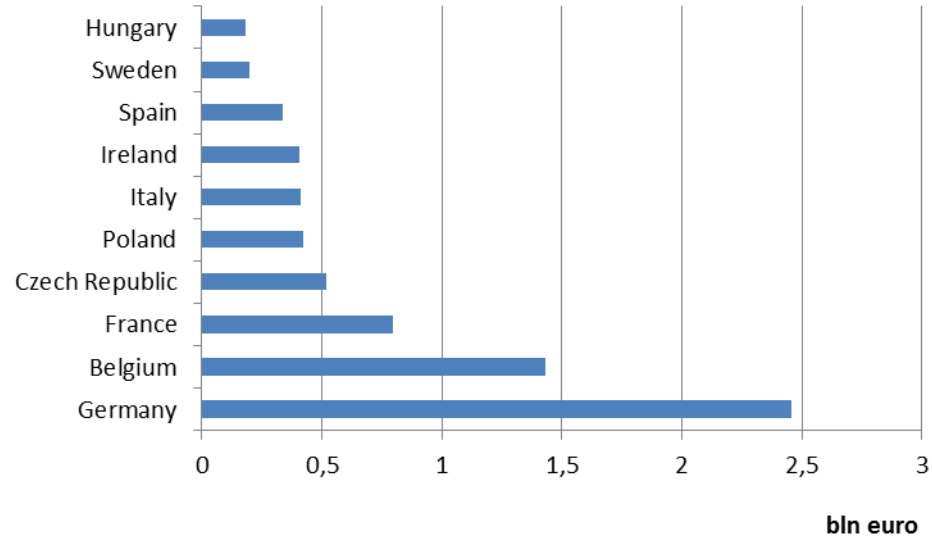
Results - country level

Share of Dutch imports from a country/region that is destined for re-exports



Results - trade with the United Kingdom

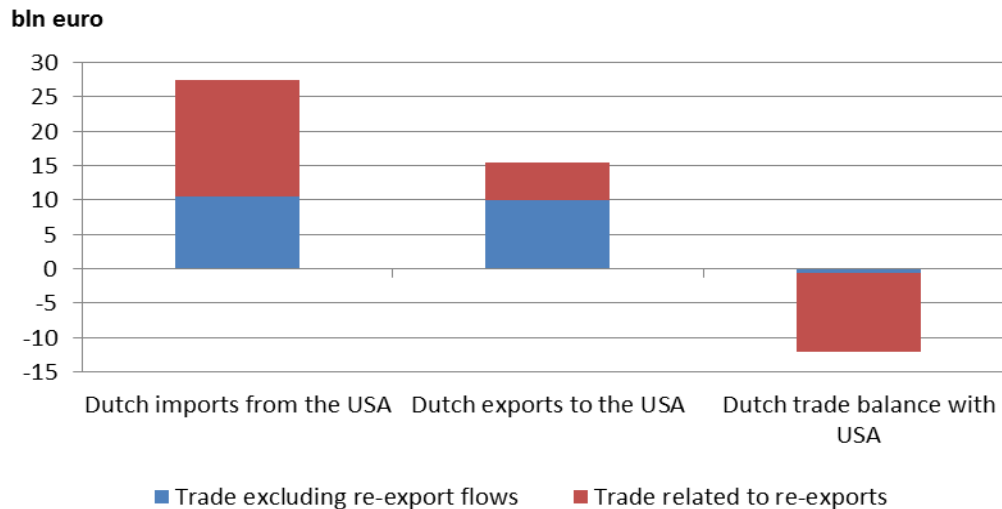
Dutch imports from EU-countries destined for re-exports to the UK, 2016



Source: Wong et al. (2018)

Results - trade balance with USA

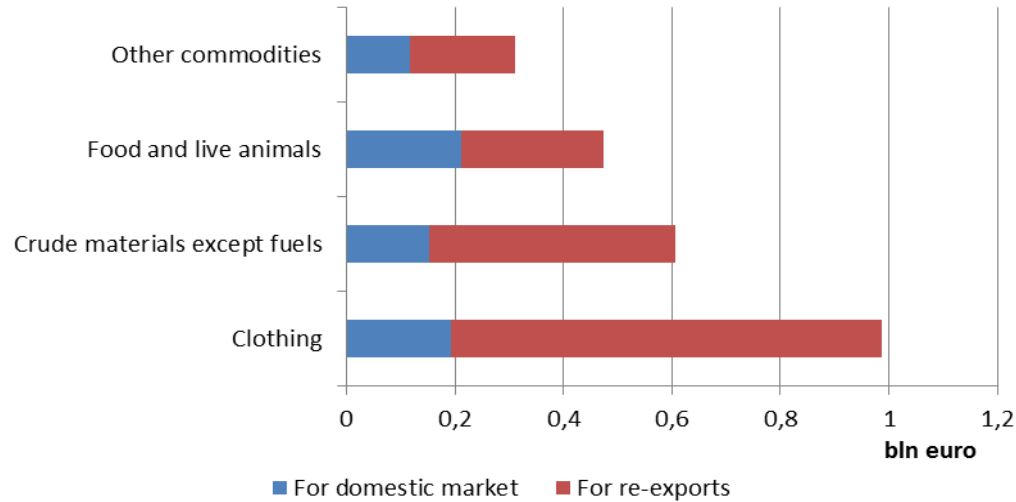
Goods trade of the Netherlands with the United States, 2016



Source: Ramaekers & Wong, 2018.

A far smaller trade deficit after removing re-export flows

Results - imports from low income countries (LICs)



Is the Netherlands mostly a hub or a market for LICs?

Is there upgrading of products?

Who supports LICs to climb the ladder of economic development by buying more advanced products?



Room for improvement

- This method still uses proportionality at the level of the trader
- Assume that imports from country A are not destined for re-exports to country A?
- Use extra information about the trader – if it is available
- Use monthly or quarterly data instead of yearly data
- Follow containers from origin to destination (feasible?)



Conclusion

- Re-exports can be sizable and they obscure dependencies between countries on the import and export side
- Relevant for MRIOs such as TiVA, WIOD, Exiobase
- Relevant for all kinds of policy issues
- Important to quantify re-export flows by country
- This method splits imports from a country
- It leads to substantially different results than a method that uses proportionality
- Other countries can apply the method using their microdata



Thank you for your attention!

Questions, remarks, comments?

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