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National Accounts and Economic Statistics - International Trade Statistics

Item 7 c): Identifying and measuring Re-Exports and Re-Imports

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1. Introduction

The sum of exports relative to the number of habitants in the Netherlands is large. Part of these exports is qualified as re-exports. Imported goods are re-exported without being significantly processed. The portion of re-exports in the total exports is large in the Netherlands due to the importance of the distribution and trade sector. National accounts analysis showed a significant increase of the re-exports in the last decades of the 20th century. It also suggested that by the year 2000 more than 40 percent of the exports were in fact re-exports. Some experts thought this exaggerated. To curtail all uncertainties, Statistics Netherlands started a project in 2003 to recalculate the amount of re-exports using the international trade data. This paper describes the way the re-exports were calculated.

There are several reasons to distinguish between exports from domestic production and re-exports. The trade flows do have a different impact on the economy. Price sensitivity and the amount of value added are different. Nearly all countries have re-exports, although not to the same extent. In the Netherlands, the amount of re-exports is significant. For a better insight in the underlying structure of the exports it is important to know which part of the exports should be qualified as re-exports.

Apart from the re-exports there are also several forms of transit. This concerns goods of which the ownership is not transferred to a native resident, or goods which are not cleared by customs. These transit flows do not fall under the scope of the statistics of international trade in goods. Therefore they will not be discussed in this paper.

2. What is Re-export

The first part of measuring re-exports is defining when a portion of the export should be regarded as re-export. What is the re-export and what is the export from domestic production? In what aspects do they differ? One of the most important aspects of re-exports is the fact that it occurs in a country is only because of the distribution or trade role of that country. This in contrast to exports from domestic production. Here the exporting country also has the role of the producer of the goods. The essence of re-exports is distribution and/or trading, while the essence of exports from domestic production is the production process.

Although the concept seems clear, in practice it is not that easy. There is no clear dividing line between re-exports and exports from domestic production. To make a reliable estimate of re-exports, one needs a clear definition of this concept. The main question is whether or not a product is the result of a production process. There are a many ways to determine whether a company should be regarded as the producer of the goods or not. The major ones are listed below.

Origin criteria

In many trade agreements between countries, it is specified that products originating from specified countries benefit from profitable import duties. One of the conditions is that you must prove that the product really originates from the specified country. In every treatment certain criteria are mentioned to determine the origin of the goods. Those criteria could be used to determine whether the exported product was produced elsewhere or not. In practice the origin criteria consist of a set of criteria listed below.

Value added

A popular way to determine whether a product was changed ‘enough’ to be regarded as produced in the homeland is to check the value added. If the value of the imported materials is less than a certain percentage of the export value, then the product is regarded to be domestically produced. Otherwise the products are regarded as re-exports when exported. The main advantage is that this criterion focuses on the economic importance of the activities. In general the value added per euro re-export is less than the value added of one euro of domestic exports. The main problem of this criterion is that a high value added is only an indication of exports from domestic production. Sometimes the value added for domestically produced exports is relatively low, whereas the value added of re-exports might be relatively high in some cases. The essence of exports from domestic production is the presence of a production process, so the definition should also focus on this aspect.

Change of goods

One of the most characteristic properties of a production process is that it changes the goods. One of the most used ways to determine whether the goods have changed significantly is to look at its product code. This can be a product code according to the Harmonized System (HS) or according to the Classification of Products by Activity (CPA). When a process changes the goods into products which have to be classified under another product code, the following export is regarded as export from domestic production. Otherwise it is re-export.

Another way to determine whether a product was changed is to use a definition such as: the goods must have undergone significant changes in a manufacturing process which have resulted in a new product. The problem of descriptions like the one above is they cannot be interpreted unambiguously without more specifications.

The methods to distinguish between re-exports and exports from domestic production mentioned above lead to different results. Every method also has its drawbacks. Nevertheless they will overlap largely.

2.1 Definition

The consensus for the definition at Statistics Netherlands was the following: a product is re-exported if it was firstly imported and that subsequently no change in the 6-digit Harmonized System product-code occurred when exported.

This definition is relatively unambiguous and it opens a possible way to measure the re-exports without the explicit help of a census. This is important as it does not increase the administrative burden for companies.

3. How to Measure Re-Exports

After defining the re-exports they have to be measured. In the Netherlands companies are obliged to provide Statistics Netherlands with a code, called the statistical procedure, which specifies the trade flow. This code should also make it possible to make a distinction between re-exports and domestic exports. Unfortunately not every company uses the statistical procedure

correctly. Only one-third of what we assume to be re-exports was reported this way. There are several reasons for this:

The first reason for this omission is the unfamiliarity with this statistical procedure combined with the discussion of what should be considered as re-exports and what not. In the past it was not clear what should be regarded as re-exports. Even within Statistics Netherlands there is much discussion about what should be regarded as re-exports and what should not. Some had a fairly strict idea about re-exports. In their view export was disqualified as re-export if any kind of processing was done on the goods. That meant that if the goods were labelled, repacked, etc, the export was regarded as export from domestic production. Also buying goods from another resident disqualified the following export from being re-export. Others claimed that exports qualified only as domestic exports when some sort of industrial process was done by an industrial enterprise. The first part of the research project was to clarify those matters. After some discussion with experts inside and outside Statistics Netherlands we agreed on the definition mentioned above. This is in fact closer to the second point of view. The information provided in the census to companies to help them fill in the survey however had expressed the first view for many years.

Another reason for the difference between the real re-exports and the measured one is that some companies were unable to tell us whether the products were produced in the Netherlands or elsewhere. That information is irrelevant for the company so that the country of origin is not registered. As long as the products meet the quality standards specified, they are happy.

The last reason is that part of the exports to third countries (outside the EU) is collected by customs. They do not specify the statistical procedure so that no information is available on the country of origin. Contrary to common belief, recent analysis proved that the amount of re-export to third countries is significant. Therefore this omission also counts for a large part of the difference.

The result is that the use of the information on the statistical procedure underestimates the real re-exports. Therefore another way to ascertain the re-exports should be found. In Statistics Netherlands two ways to estimate the amount of re-exports are used. The first and oldest way is the use of the supply-and-use tables of the National Accounts, which will be described only briefly here. The second way is to use a model to identify the re-exports in the data of the international trade in goods.

3.1. Indirect Way: Supply-and-Use Tables

One way to estimate the amount of re-exports is to use the supply-and-use tables of the national accounts. By confronting among other things - per groups of products - the export with the import and the production, an estimation of re-exports can be given.

This confrontation gave the Netherlands already estimates on the re-exports in the mid nineties. This method is rather accurate and can provide figures on the meso level of goods. The drawback is that it is an indirect method and gives information only on an aggregated level. Information on the level of individual companies is not available. Therefore this method cannot provide more detailed information such as country-information.

3.2. Direct Way: A Model Using the International Trade Statistics

Due to the limited quality of the statistical procedure it is not possible to measure the re-exports directly. A model is necessary to estimate the re-exports.

The way we define the re-exports opens a way to measure it. In the model, the general principle is to compare the imports to the exports of one company. If the value of the export per HS-code is more or less comparable with the value of the imports of the same product, then most probably the export will be re-export. Conversely if the exports are much larger than the imports at least some production will be involved. In the model the factor is valued at 2, i.e. the export value should be at least twice the import value so that we can be sure that there is some domestic production.

In theory the link between imports and re-exports could be done best by using quantities instead of values. This is not possible due to quality issues in reporting quantities.

To enhance the estimates the largest exporters were profiled. A list of the largest exporters in the Netherlands was compiled. An attempt was made to collect information about what they were doing and what the origin of their export was. Very often companies will offer information as to whether exports are produced elsewhere or are produced in the Netherlands. This information is very useful and will be used for the calculation.

Another factor is taking the production structure into account. In the Netherlands bananas do not grow, so every exported banana can only be a re-exported banana.

Last but not least the statistical procedure discussed above is used to determine some of the re-exports. The problem of the statistical procedure is the problem of the false negatives, i.e. it underestimates the re-exports. The converse problem – false positives – is much smaller. Therefore, whenever companies report that they re-export, this information can be used quite safely, while the use of the code for domestic exports is questionable.

The comparison of the imports and exports should be done on an enterprise-group level. When the comparison is done on a smaller scale, department or even branch or office level, problems with intra-company trade may arise. For example the import department of a company imports the goods while the sales office exports them to a foreign country. Seeing the import department and the sales office as two different entities, the model would draw the wrong conclusions.

Another methodological problem involves the import of production companies. Almost every company imports the very same products it produces and exports. Added together these imports count for several percentage points of the total imports in the Netherlands. The problem is that the final destination of these imports is unknown. In most cases no information is available. The assumption that all imported products will be exported, and nothing is destined for the internal market, leads to an overestimation of the re-exports. On the other hand, the assumption that nothing will be re-exported is not realistic either. Therefore national accounts data is used. According to the national accounts about 40 percent of the total supply of goods is imported in the Netherlands. That figure is used to split up the imports.

The figure of 40 percent is on macro level. Although more detailed information on different products is available, that information was not used for technical reasons.

The comparison can be done for different lengths of time periods. Take for example the following hypothetical figures about the international trade of a given company in one commodity code. The estimated re-exports is calculated the way described above:

time period	imports	exports		estimated re-exports
April	€ 60	€ 10	=>	€ 10
May	€ 20	€ 70	=>	€ 8 (= 40% x € 20)
June	€ 20	€ 30	=>	€ 30
	----- +	----- +		----- + ≠
2 nd quarter	€ 100	€ 110	=>	€ 110

This example shows that when the comparison is done on a monthly basis, effects due to stock changes are disturbing. In April the stocks are built up by imports, and sold in later months. The exports in May should be seen as re-exports. Those goods were imported earlier. A comparison on a monthly basis however will conclude that most exports in May are domestic exports. There was little import in that month, so that the conclusion would be that most exports had to be produced in that month. Of course this is wrong. The solution is to make the comparison on a quarterly or even a yearly basis. Normally the trade flow in one year is much larger than the stock changes. The stock changes should therefore have negligible effect on the total imports and exports. Adversely however, some seasonal effects will be neglected, but this preferable to the disturbing effects of stock building.

4. How to Estimate Re-Imports

Re-imports are imported goods which will be re-exported at a later stage. Re-imports cannot be measured directly, because the destination of the import is not always known at the moment of import. Spare parts illustrate this. Parts are needed the moment a machine needs to be repaired. At the moment of import it is not known where that part will be needed. Therefore measuring re-imports will always require a model.

The model used to measure the re-exports also opens a way to estimate the re-imports. Because the method essentially tries to link the export with a corresponding import, also the re-import is known. With the link between them, an educated guess can be made how much of the import was re-exported and how much was sold domestically.

One of the most interesting aspects of the re-exports is its value added. Unfortunately we were not (yet) able to calculate that. The missing part is reliable price information of both the re-imports and re-exports. Therefore we cannot calculate the real value of the re-imports. Nevertheless the relative share of product groups and countries in the re-imports can be calculated.

5. Results

A major result is the confirmation that the share of re-exports is more than 40 percent of the total exports in goods. This is in line with the analysis made by the national accounts department, despite the doubts of some experts.

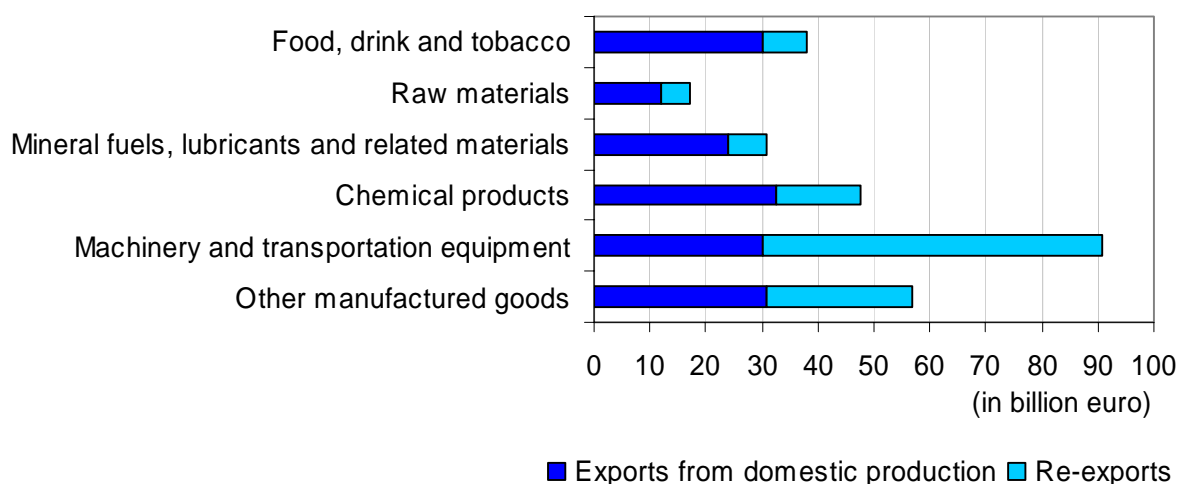


Figure 1. Value of exports from the Netherlands per product group in 2005.

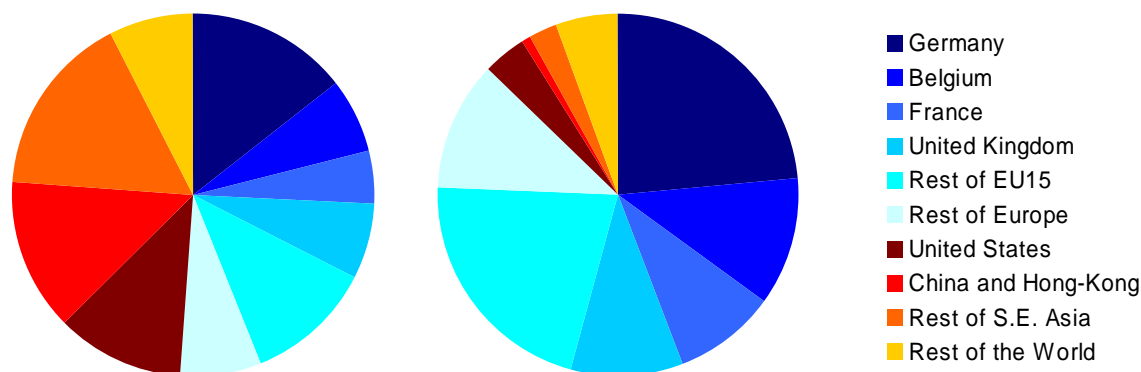
The results show that about half of the re-exports is machinery and transport equipment. Especially exported computers, computer parts and consumer electronics are mostly foreign-made. Medical and optical instruments and clothing also show a considerable re-export.

On the other hand chemical products count for more than 20 percent of the exports from domestic production. Food, drink and tobacco, machinery and transportation equipment and other manufactured products each have a share of almost 20 percent of the domestically produced exports.

These figures are also published on StatLine, the internet databank of Statistics Netherlands.

Information on a country level is still under investigation. Nevertheless some preliminary results will be published. According to these results about half of the re-exports of the Netherlands originate from European countries. That is far less than the imports for domestic use. They originate for almost three-quarter from other European countries. Especially imports from South-east Asia and the United States are often meant for re-export.

Figure 2. Share of the origin of the re-exports (left) and the destination of the re-exports (right) in 2005.



On the outgoing side only about 13 percent of the re-export has a country outside Europe as destination. As a comparison, the share of the domestic exports to those countries is twice as much.

6. Conclusions

In the Netherlands more than 40 percent of the exports qualify as re-exports. A comparison between the import and export figures of individual companies leads to this conclusion. This is in line with analysis from the National Accounts.

Re-export is a phenomenon that exists in almost every country, although not to the same extent. The impact of re-exports is economically different than exports from domestic production. An estimation of the actual value of re-export can be made using the model described above. For an enhanced insight into the world economy it is advised that more countries carry out the above calculations.