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THE DUTCH APPROACH TO CROSS BORDER TRANSACTIONS IN THE NATIONAL ACCOUNTS

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Introduction

Some 100 years ago a producer produced goods mainly for the local market and was sometimes able to realise a certain amount of exports, directly or via wholesalers. In those days compilation of national accounts was rather straight-forward. Things have changed since then. Multinational enterprises (MNE's), having production plants in several countries came into existence. The question arose what part of value added of the MNE belongs to which country. In the course of time production processes were split up, not only within a country but also across borders. This lead to in- and outward processing. The idea then was, that after processing, the goods all returned to the principal. Nowadays those goods are often directly sold abroad and do not return to the "homeland". The final stage in this evolution of economies is the so called "production abroad" where either the raw materials or the final products enter the country of the owner (principal).

A similar evolution can be seen in wholesale trade. In the beginning the distribution function was focussed on the local market, but international trade rapidly became more important now and then resulting in a situation of a merchant for whom the local market is irrelevant.

The national accounts are traditionally focussed on production and production processes, shown by the supply use tables and the square input output tables. With the on going globalisation of production (processes) the homogeneity is under strong pressure and also the ownership of the concerning goods is often ambiguous.

The System of National Accounts 2008 (SNA 2008) reflects these changes in the economy as it focuses more on actual changes in ownership and the linked financial settlement and less on production processes compared to its predecessors. Imputed changes of ownership for processing as in the SNA 1993 are abandoned.

The SNA2008, in its preface, succinctly summarises the modifications to the previous manual from 1993. These transformations also apply to the European System of Accounts 2010 (ESA2010).

> "**The application of the principle of change in ownership of goods has been made universal**, resulting in changes to the recording of merchanting and of goods sent for processing, both abroad and within the domestic economy, and then returned to the owner[1]. These changes have shifted the focus away from the physical movements of goods to the impact on the economies of the owner of the products and the processor. As a result, they are consistent with international financial transactions that are increasingly important in a globalized economy."

For the national accounts in the area of cross border transactions there are 4 major modifications:

i. Goods sent abroad for processing are no longer to be included in the import and export of merchandise. The processing fee is to be treated as a service.
ii. Merchanting is no longer to be treated as a service and will in the future be recorded as a gross flow in the export of merchandise.
iii. Imputation for changes of ownership for inter company trade by multinational enterprises will be abolished.
iv. Production abroad. Strict adherence to the 'ownership principle' means that in production facilities abroad where economic ownership of raw materials, final products and processes are owned by a domestic enterprise this also must be included in the domestic economy.

For processing and merchanting these changes entail a shifting of classification between goods and services.

Though the above may seem logical, it does pose a great challenge for statistical departments to realize. In most countries the International Merchandise Trade Statistics, 2010 (IMTS2010) lie at the heart of data compilation of merchandise flows in and out of an economy. The Foreign Trade Statistics (FTS) mandated by the EU is more or less identical to the IMTS 2010. The IMTS and the FTS only measure imports and exports of an economy when the goods physically cross the

[1] It must be noted that the goods do not always return to the owner physically but often "leak" to customers in other countries.

border; this includes merchandise sent for processing and excludes merchanting and large parts of production abroad. As the FTS is the major source for national accounts import and export flows of merchandise, a number of essential amendments must be made to this data before it is usable for the national accounts. Furthermore the surveys for international trade in services (ITS) and the structural business surveys (SBS) will need modification if fulfilment of the new definitions is to be met.

A. Processing

Industrial processing entails manufacturing services on physical inputs owned by others. The entity providing the manufacturing service is paid a fee by the owner of the goods. The ownership of the goods concerned is not changed. Therefore there is no import or export of goods. There is however, an import or export of a service conform the revised SNA/ESA. SNA1993 and ESA 1995 prescribed the recording of gross flows for processing which crossed borders (not for domestic processing, this has always been considered a service). The goods concerned with the processing were recorded as import and export as a change ownership was imputed. It thereby became production and intermediate consumption of domestic entities. Prior to ESA 1995 in the Dutch national accounts only services were recorded.

Within Statistics Netherlands processing is measured by a number of statistics, all from their own viewpoint:

- The statistics of international trade in goods.
- The statistics of international trade in services (possibly in part)
- Prodcom statistics.
- Structural Business Statistics

International Trade in Goods (FTS)

Prior to ESA 2010 and SNA 2008 when goods moved across borders a change of ownership was generally assumed when a resident entity, not being a fiscal agent (or such) operating for non-resident entities, was involved. In the case of a processing transaction where ownership does not change hands, a change of ownership was imputed. Because FTS data measure physical cross border movements of merchandise, goods for processing were automatically included.

In the Dutch national accounts a distinction is made between regular import and export and processing flows. In the past this enabled comparisons to be made during the balancing process between Structural Business Statistics values of the

fees for industrial processing and the net flow of the FTS (export minus import and vice a versa). Even though processing flows distinguished in the Dutch FTS are statistically weak and often incomplete, they were to a certain extent usable. From the import and export of merchandise point of view in the national accounts little could go wrong in the macro sense, as those flows mistakenly not recorded under processing remain in the regular import and export. Gross recording of processing and regular flows of imports and exports are as the law of interconnected vessels.

The alteration of gross recording to net recording poses a major problem to national accountants who use the FTS as their source for the estimation of foreign trade of goods. The flow between the interconnected vessels is disrupted. The FTS includes in its cross border flow of goods, goods for processing. These must be deleted from the FTS totals in order to fulfil the requirements of SNA2008/ESA2010. This is easier said than done with the included danger that if the deductions are not correct the macro total of imports and exports is influenced and thereby possibly gross domestic product (GDP) and the balance of payments. On top of this the totals subtracted must bear some resemblance to processing fees recorded under the import and export of services.

The great amount of detail of the FTS as used in the framework of supply and use tables makes these amendments of more import than they are now, due to the effect on GDP and the balance of payments.

In the Dutch FTS, data collection includes two extra variables. These indicate if the flow of goods is inward or outward processing. Even though these variables are mandatory for the EU the data are not controlled or adjusted for faults. This often leads to implausible results, in so far that one is confronted with negative processing fees. Under gross recording of processing national accountants made ad-hoc corrections in the processing data so that the results were plausible. As mentioned above this had no consequences for GDP as the complement was in regular merchandise. With the revised definition of processing it is essential that the inward and outward processing as recorded in the FTS be accurate so that the import and export of merchandise truly reflect their effect on the economy. In

order to improve the data from 2012 onwards special attention will be paid to the estimates of cross border flows of in- and outward processing in the FTS data.

As the data collection of the Dutch FTS stands at the moment there are a number of other disharmonies not counting plausibility control. For example, in the case where goods are exported abroad to be processed, the value of this transaction will be recorded as exports in the FTS, flagged with the variable outward processing. If not all the goods sent abroad for processing return and for example is sold in the country of the processor or has found its way to other foreign markets we have a leak. In this case the FTS only measures what is returned to the homeland. The difference between export and import here, which will be negative in this case, in no way reflects the cost of processing, making the confrontation with data from statistics on international trade in services (ITS) and SBS on processing fees, difficult. Subtracting this data from the FTS totals leaves us with an incomplete picture of what should be recorded in national accounts. After all, the processed material that stays abroad must be earmarked as regular export. As yet there is no way to determine the value of processed merchandise that remains abroad based on observed data.

The mirror image of this example is also possible with inward processing. What results then is not only an unjust approach to the processing fee but also an under estimation of import. It must be noted that these problems are not new, but have never been fully addressed. To measure this phenomena was and will be a great challenge to FTS/ITS compilers and national accountants.

In the present ITS there is a query included in the survey of the larger companies where the processing fee was asked of those companies where either processed merchandise was sold directly abroad (regular export of merchandise) or where merchandise processed domestically was sold directly to the domestic market (import of merchandise). The revised ITS is also planning to survey these leaks.

The data from FTS as shown in *Table 1 seems* encouraging as processing fees should in all feasibility be positive. Exception is of course the balance for mining and quarrying which shows a large negative but this is readily explained with the large positive balance with the manufacture of petroleum products. Crude

petroleum has a totally different CPA code to the CPA of shall we say diesel oil or jet fuel. For 2006 combining the data on crude oil and final oil products results in a positive fee. For 2007 and 2008 there is still a negative balance. This may point to a leak in that much of these products remain in the country of the processor. These leaks make deriving processing fees from FTS data very risky. As the above example shows, also the changes in commodity classification between the input of the processing and the output makes it complicated to compile processing fees.

Data according to the Dutch FTS

Table 1

Inward Processing[2]

in millions of euros

	import			Export			processing fee		
	2006	**2007**	**2008**	**2006**	**2007**	**2008**	**2006**	**2007**	**2008**
Agriculture, forestry and fishing	2	4	3	2	6	5	0	3	1
Mining and quarrying	3973	4695	7077	2	1	1	-3971	-4694	-7075
Food products, beverages and tobacco	32	69	81	50	187	120	18	118	39
Textile and leather products	19	15	7	21	19	11	2	4	4
Wood and glass products and construction materials	*6*	*6*	*2*	8	9	5	2	3	3
Paper and paper products and publishing and print	68	59	57	173	198	99	105	139	43
Manufacture of petroleum products	51	0	0	4201	2910	3961	4150	2910	3961
Chemicals, man-made fibres and rubber and plastic	360	84	78	353	318	313	-7	234	235
Basic metals and fabricated metal products	274	363	412	470	543	559	196	180	147
Machinery and equipment n.e.c.	233	196	164	235	340	333	2	143	169
Electrical and optical equipment	204	183	173	286	207	233	82	24	60
Transport equipment	344	303	244	513	712	815	169	409	571
Other manufacturing	1	3	4	7	3	5	6	1	1
Total	**5567**	**5980**	**8302**	**6321**	**5454**	**6461**	**754**	**-525**	**-1840**

Outward processing shows more negative balances (see *Table 2)*. Partly this is probably caused by leaks, meaning that processed goods do not return to the homeland but are sold abroad directly. With the negative balances of table 2 it is not clear how to make adjustments, what is caused by leakages and what is due to statistical deficiencies.

[2] Please note that *Table 1* and *Table 2* that classification in industry branches is via commodities.

Table 2

Outward Processing[2]

in millions of euros

	import			Export			processing fee		
	2006	**2007**	**2008**	**2006**	**2007**	**2008**	**2006**	**2007**	**2008**
Agriculture, forestry and fishing	9	7	7	127	151	136	-118	-143	-129
Mining and quarrying	0	0	0	0	0	0	0	0	0
Food products, beverages and tobacco	68	51	32	31	38	32	37	13	0
Textile and leather products	332	274	250	175	172	150	157	102	101
Wood and glass products and construction materials	3	3	4	12	11	14	-9	-8	-10
Paper and paper products and publishing and print	11	14	17	12	13	13	-1	1	5
Manufacture of petroleum products	12	0	0	22	3	11	-10	-3	-11
Chemicals, man-made fibres and rubber and plastic	98	395	5343	118	310	5242	-20	85	100
Basic metals and fabricated metal products	154	183	178	148	152	140	6	31	38
Machinery and equipment n.e.c.	111	116	176	263	257	255	-152	-142	-78
Electrical and optical equipment	182	193	321	393	468	428	-211	-275	-108
Transport equipment	378	559	630	350	308	484	28	250	146
Other manufacturing	3	6	4	14	7	9	-11	0	-4
Total	**1361**	**1801**	**6963**	**1665**	**1890**	**6914**	**-304**	**-89**	**49**

Table 3

Summary

in millions of euros

	Inward processing			Outward processing		
	import	**export**	**Processing fee**	**import**	**export**	**Processing fee**
2006	5567	6321	754	1361	1665	-304
2007	5980	5454	-525	1801	1890	-89
2008	8302	6461	-1840	6963	6914	49

The conclusion now must be that momentarily the FTS cannot be used as the sole source for estimating processing. It is however very useful in determining which products (goods) are involved in processing.

In the coming years efforts are being made to upgrade the plausibility control of inward and outward processing through extra profiling of a large number of enterprises. This, however, will not contribute to insight in the import and export leaks as this falls out of the scope of the FTS. As mentioned before with the ESA 2010 the ITS will record the correct processing fee and in the Netherlands additional information will be collected on the leaks.

International Trade in Services (ITS)

At the moment the regulations that apply to the international trade in services only obliquely refer to processing As the trade in services and goods are so closely related in relation to processing, the new design of the services survey (to be implemented in 2012) will, at least for comparison purposes, use data provided by the FTS. It must be noted here that the difference between the gross flows of processing (export minus import for inward processing and import minus export for outward processing) do not necessarily cover all processing services. This can be caused by holding gains and losses, inclusion of overheads (such as marketing, financing and know how included in the finished good price), and measurement errors associated with the valuation of goods movements where there is no sale.

The redraft of the survey for the international trade in services will include processing services even though there is discussion at the moment of things being done twice (FTS also measures processing). The disadvantages of using the FTS as sole source for processing are however evident from the results above so additional information is necessary. Also the use of ITS is not without problems. Presently the sample does not allow a break down of imports and exports of services into industrial branches.

Prodcom

In the Prodcom statistics data are collected on the composition of turnover of manufacturing on a detailed level of the international commodity classification CPA. Furthermore the turnover of industrial services is itemized into CPA codes. Industrial services include installation, repairs and maintenance, but it is clear that the major part of these services is processing. Industrial services in Prodcom is inclusive of domestic processing and even though there is a separate inquiry concerning industrial services earned abroad this does not exclude processing under other CPA codes and can therefore only be seen as a lower limit of inward processing. Of all present sources Prodcom most probably records processing most accurately. The CPA codes make it possible to distil repairs, installation and maintenance services so that what remains we can safely assume is the total amount of processing in the Dutch economy (domestic as well as inward processing from abroad).

Table 4 ***Data according to the Dutch Prodcom***

In millions of euros

Industrial services (classified per industrial branch)	**Total industrial services**			**Total excluding repairs, installation and maintenance**		
	2006	**2007**	**2008**	**2006**	**2007**	**2008**
Agriculture, forestry and fishing *	-	-	-	-	-	-
Mining and quarrying	9	15	4	9	15	4
Food products, beverages and tobacco	343	399	434	343	399	415
Textile and leather products	120	139	129	120	136	141
Wood and glass products and construction materials	185	177	191	131	132	112
Paper and paper products and publishing and printing	1771	1831	632	1770	1830	568
Manufacture of petroleum products *	-	-	-	-	-	-
Chemicals, man-made fibres and rubber and plastic products	259	307	290	249	283	318
Basic metals and fabricated metal products	1916	1979	2660	981	1137	1010
Machinery and equipment n.e.c.	2613	3232	3094	1847	2246	1953
Electrical and optical equipment	1480	1647	1674	524	468	614
Transport equipment	1179	1880	2017	120	227	270
Other manufacturing	46	37	53	16	12	18
Total	**9922**	**11642**	**11179**	**6110**	**6884**	**5424**

* Please note that there is no Prodcom for this industrial branch

Table 5 shows the export of industrial services. It must be kept in mind that this only illustrates the amounts filled in under a special code with the description 'other industrial services for enterprises outside the Netherlands'. There are many other CPA codes relating to specific activities where there is no division between services domestic or abroad.

Table 5

in millions of euros

Export of Industrial services (Prodcom) (classified per industrial branch)	**export industrial services**		
	2006	**2007**	**2008**
Agriculture, forestry and fishing *	-	-	-
Mining and quarrying	1	2	1
Food products, beverages and tobacco	121	101	90
Textile and leather products	21	24	6
Wood and glass products and construction materials	7	6	12
Paper and paper products and publishing and printing	48	52	58
Manufacture of petroleum products*	-	-	-
Chemicals, man-made fibres and rubber and plastic products	55	65	88
Basic metals and fabricated metal products	201	248	120
Machinery and equipment n.e.c.	60	123	68
Electrical and optical equipment	437	428	227
Transport equipment	42	52	56
Other manufacturing	0	1	1
Total	**992**	**1101**	**726**

* Please note that there is no Prodcom for this industrial branch

The table reflects the lowest possible value of inward processing for the Netherlands. The real value of inward processing is probably hundreds of million euros higher.

The conclusion must be that Prodcom does not completely full fill our needs for estimating the value of processing.

Structural Business Surveys (SBS)

It is apparent that SBS type statistics are obviously the best place to record the service fee connected with both inward and outward processing. These fees are part of a whole integrated structure of earnings and costs concerned with an enterprise. In the Dutch SBS, however, these fees are not specified separately. On the sales side it is included in the registered totals for industrial turnover. These include industrial services of which processing are a part. There is a separate inquiry that requires industrial services delivered to foreign enterprises to be recorded. These services include, amongst others maintenance, repairs, installation and processing.

Table 6

in millions of euros

Industrial services abroad - SBS	**received industrial services from abroad**			**industrial services paid abroad**		
	2006	**2007**	**2008**	**2006**	**2007**	**2008**
Agriculture, forestry and fishing *	-	-	-	-	-	-
Mining and quarrying	683	355	578	31	70	21
Food products, beverages and tobacco	101	177	259	51	106	120
Textile and leather products	99	103	42	62	66	82
Wood and glass products and construction materials	34	10	191	13	18	25
Paper and paper products and publishing and printing	378	245	212	83	122	155
Manufacture of petroleum products#	-	-	-	-	-	-
Chemicals, man-made fibres and rubber and plastic products	287	330	319	206	150	131
Basic metals and fabricated metal products	562	409	610	332	396	248
Machinery and equipment n.e.c.	560	708	370	148	168	269
Electrical and optical equipment	1003	370	406	69	56	116
Transport equipment	322	616	561	290	202	120
Other manufacturing	41	35	15	22	22	28
Wholesale trade	0	0	0	613	619	497
Total	**4072**	**3358**	**3563**	**1920**	**1996**	**1815**

*Please note that there is no SBS for this industrial branch

#petroleum products are included in SBS, but for the time being no suitable data are available due to a.o. payments in kind of the processing fees

Intermediate consumption details show the cost of industrial services, once again including maintenance, repairs, installation and processing. In a further specification these costs are divided into foreign and domestic costs, sometimes per CPA code. The following table shows the industrial processing fees earned from foreign enterprises and the fees paid to foreign enterprises. Inward and outward processing are per definition a component of these values.

In the future, due to the extra administrative burden and the available resources, more detail from SBS statistics cannot be expected.

A confrontation

To estimate inward and outward processing there is at this moment no clear cut source of information providing exhaustive and coherent data for available. There are, however, a number of sources that give us insight into the issue of processing. Of the available sources SBS and Prodcom are the most comprehensive. Using both SBS and Prodcom together will, most probably give the best estimate of processing fees per industry. In the future when ITS has been revised to the new BPM 6 and ESA 2010 definitions it will be a sound source for estimating processing fees, even though it will not produce results per industry.

SBS data include repairs, installation and maintenance. Prodcom data reveal, in *table 4*, the total on industrial services (domestic and abroad) and also estimate a value for repairs, maintenance and installation. As Prodcom and SBS determine their sample from the same population, grossed up estimates on the industry level can be compared. The larger enterprises (enterprises with more than 50 employees) are integrally surveyed in both statistics and can be compared on a unit level. Using the ratios ("industrial services excluding repairs etc." divided by "total industrial services") of Prodcom in *table 4* (via the underlying data per NACE group) it is possible to distil the processing fees using the SBS data from *table 6.* That is the total excluding repairs, installation and maintenance divided by the total industrial services (both from *table* 4) multiplied by either the received industrial services from abroad or industrial services paid abroad in *table* 6. Although the ratio's in *table 4* only apply to inward processing it is assumed

that the same ratios can be used for outward processing. These calculations lead to *Table 7*.

It must be noted here that where Prodcom scored zero for repairs etc. for a NACE group unadjusted SBS data was used in *Table 7* in the assumption that there are no repairs, installation or maintenance.

Wholesalers form a distinctly different group than the industrial manufacturers. It is not plausible that wholesalers have considerable costs for repairs, maintenance and installation because they do not have extended machine parks. This implies that the amounts recorded in the SBS questionnaire can be used without corrections. Also, on the turnover side for wholesalers, the questionnaire does not include a query on earned industrial fees as do the questionnaires for industry. Additional research with the FTS data is necessary to see if wholesalers also sell industrial services. If the FTS does show evidence of inward processing by wholesalers corrections can be made using the approach described in the next paragraph. For the time being the production of processing fees by wholesalers is assumed to be zero.

Table 7

in millions of euros

Processing fees as derived from SBS	**inward processing**			**outward processing**		
	2006	**2007**	**2008**	**2006**	**2007**	**2008**
Agriculture, forestry and fishing *	1	3	2	10	13	15
Mining and quarrying	274	260	328	2	1	1
Food products, beverages and tobacco	101	177	259	51	106	120
Textile and leather products	97	97	41	47	66	82
Wood and glass products and construction materials	16	8	188	10	14	18
Paper and paper products and publishing and printing	378	245	212	83	122	155
Manufacture of petroleum products #	-	-	-	-	-	-
Chemicals, man-made fibres and rubber and plastic products	287	330	319	205	146	128
Basic metals and fabricated metal products	449	366	289	235	272	114
Machinery and equipment n.e.c.	418	495	160	108	113	170
Electrical and optical equipment	355	105	158	24	16	45
Transport equipment	32	58	64	38	20	15
Other manufacturing	22	19	9	12	8	16
Wholesale trade	0	0	0	613	619	497
Total	**2432**	**2164**	**2030**	**1437**	**1516**	**1376**

*Please note that there is no SBS for this industrial branch

#petroleum products are included in SBS, but for the time being no suitable data are available due to a.o. payments in kind of the processing fees

Although the SBS depicts virtually all the processing fees, one sector is still absent. Agriculture, forestry and fishing are missing as there is no SBS for this sector. As there are no other sources FTS must be used. FTS is sorely lacking in presentable data for agriculture. We have tried to solve this by assuming that where something is surveyed in the FTS, there must be a corresponding number in either the import or export. For example we have a value of 50 imports with inward processing of flowers and the export is absent. A value of 60 is than imputed for the export as we must have a positive fee (the fee is 60-50=10). 60 is an expert guess. With outward processing a similar approach is used, only here the imports must be higher as the fee is paid abroad. Where numbers for both imports and exports are present these are used. The estimations for agriculture have been included in *Table 7* which now shows the total (excluding petroleum products for the time being) fees paid and received in the Dutch economy for processing abroad.

In an ideal statistical world data shown in *tables 1* and *2* would be comparable to the data in *table 7*. The difference being that the leaks into import or to export would then be apparent assuming that the difference between import and export is the same as the processing fee. Further research is necessary to explain the differences in *table 1, 2 and table 7*.

FTS data is only palatable for the national accounts if a way is found to estimate the gross processing flows so that they can be subtracted from the FTS data. Because FTS data is used in the framework of the supply and use table the amendments to this data must at least be in level of detail of the SUT. In the Netherlands the number of CPA-like commodity groups relevant for processing numbers around 150. To ensure proper balancing between supply and demand, imports and exports of merchandise for a great number of commodity groups must be subtracted from the FTS. This requires further research but falls, for the moment, beyond the scope of this report.

B. Merchanting

Merchanting is the purchase of goods by residents (of the compiling economy) from non-residents where the resale of the same goods is to other non-residents without the goods ever having been present in the compiling economy.

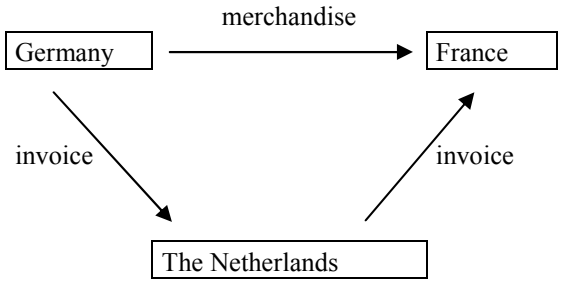
Presently the Dutch national accounts only records the merchanting margin, that is the value of goods sold less the value of purchasing these same goods. SNA2008/ESA2010 prescribes that the purchases of the merchant will be recorded as a negative export and the sales as a positive export. The 'net' exports (which can also be negative) include the merchant's margins, holding gains and losses and changes in inventories.

The sources for merchanting in the national accounts can be found in three surveys conducted by Statistics Netherlands:

- International trade in goods – the so called ABC deliveries (triangular trade within the EU), this only records the sales.
- International trade in services – presently this only records the 'net' exports.
- The SBS of Wholesale trade – this records the purchases of goods as well as the sales.

International Trade in Goods (FTS)

For VAT purposes enterprises are mandated to report their intra EU deliveries to their tax authorities, the so called simplified ABC transactions or triangular trade. ABC transactions are those where merchandise is delivered between two enterprises in different countries and the invoicing (by the owner of the goods) of the sold merchandise finds place in a third country without the merchandise ever having been physically present there. In the Netherlands these transactions are registered via the Central Liaison Office (CLO) which is part of the internal revenue service. Statistics Netherlands, the FTS department, receives these data once per quarter – known under the name of the ICP Listing (Intra Communal Performance). Schematically as follows; A Dutch enterprise buys goods in Germany and commissions the German company to deliver the goods to France.



There are a number of disadvantages:

i. The definition of the ABC deliveries is not precisely the same as that of merchanting
ii. ABC deliveries only encompass transactions of Dutch enterprises inside the EU and thereby only the sales. The accompanying purchases cannot be distinguished.
iii. Not all enterprises choose to register via the CLO. Large enterprises often choose for VAT payment/registration in the different countries.
iv. The VAT declaration form is ambiguous.

At the moment data are only available for the year 2010 so that comparisons in time are not yet possible. We can assume that the data on ABC deliveries are quite accurate on the sales side in the EU. However the ABC deliveries are far from being comprehensive for Dutch merchanting. On the other hand these data give us a clue of the enterprises that occupy themselves with merchanting outside of wholesale trade (which is comprehensively covered in the SBS). As the population for Dutch foreign trade statistics is based on VAT numbers there is no direct link to a NACE type of classification. There is, however, a tentative link to the population of the SBS, which in turn are NACE classified. This gives us more insight into the spread of merchanting over industries; See *table 8:*

Apparent is that merchanting seems widely present outside of wholesale trade, also under industries one does not expect. This is partly due to the fact that fiscal representatives, affiliated enterprises or a logistical concern take care of all administrative dealings using their own VAT-number. For the industry classification this means that transactions are allocated to the wrong NACE, as these fiscal representatives are not the actual owners of the goods. This

phenomenon possibly explains the relatively large amounts in transport and commercial services.

Table 8

Exporting industry/sector – ABC transactions	export in millions of euros
Agriculture, forestry and fishing	135
Mining and quarrying	16
Food products, beverages and tobacco	447
Textile and leather products	34
Wood and glass products and construction materials	65
Paper and paper products and publishing and printing	129
Manufacture of petroleum products	10
Chemicals, man-made fibres and rubber and plastic products	1333
Basic metals and fabricated metal products	401
Machinery and equipment n.e.c.	416
Electrical and optical equipment	120
Transport equipment	151
Other manufacturing	75
Electricity, gas and water supply	0
Construction	41
Wholesale trade (excl. motor vehicles/cycles)	6351
Other trade, hotels, restaurants and repair	861
Transport, storage and communication	3866
Financial and business activities	1328
General government	1
Care and other service activities	124
Unknown	12069
Total	**27973**

A major drawback of the ABC-deliveries is that it only encompasses the export inside the EU so the merchanting margins are absent. What's missing is the export outside the EU and all the import. Also the ABC does not show the complete picture of the export to the EU as many (mostly large) enterprises choose not to use the simplified ABC-deliveries but have their own VAT numbers in the countries where they are active.

International Trade in Services (ITS)

Even though included in the survey of ITS, the net export of merchanting margins is of debatable quality. This is due to the fact that publication data and data delivered to the national accounts are at present based on models. For the time

being the observed data are not grossed up to population totals and the plausibility control is in fact non-existent.

The data in the table below only shows data from the larger enterprises (*table 9)* as there was no data collection for smaller enterprises on this phenomenon until a trial test in 2009 (*table 10)*.

Table 9

Net merchanting margins according to ITS	**Margins in millions of euros**		
(Only large enterprises)	**2006**	**2007**	**2008**
Food products, beverages and tobacco	120	65	66
Chemicals, man-made fibres and rubber and plastic products	0	0	9
Electrical and optical equipment	21	21	1150
Wholesale trade (excl. motor vehicles/cycles)	1273	1221	1554
Hotels, restaurants and repair	612	648	441
Transport, storage and communication	250	129	135
Total	**2276**	**2085**	**3355**

Table 10

Net merchanting margins according to ITS	**Margins in millions of euros**
(Only small enterprises)	**2009**
Textile and leather products	0
Wood and glass products and construction materials	4
Chemicals, man-made fibres and rubber and plastic products	0
Machinery and equipment n.e.c.	3
Electrical and optical equipment	0
Other manufacturing	3
Wholesale trade (excl. motor vehicles/cycles)	869
Transport, storage and communication	9
Financial and business activities	27
Total	**916**

It is difficult to interpret these figures. It is for example possible that the 'jump' in electrical equipment in 2008 is caused by changes in internal organisation of multinational enterprises.

Taking into account SNA2008/ESA2010/BPM6 ITS will probably be responsible for collecting data on merchanting. Limits are found in the political climate on increasing the survey load for enterprises. Optimally these data will show both the purchases of goods for resale (import or negative export) as well as the sales

(export). Even then it will not be possible to make estimates at the industry level of the SUT. This data are anticipated at the earliest for the reporting year 2013.

In conclusion, ITS is momentarily an insufficient source for merchanting and can, at best, be used for comparisons.

Structural Business Surveys (SBS)

The SBS of 'wholesale trade' is the only place in Statistics Netherlands where there is a survey question pertaining to this phenomenon. This survey is especially suited to our needs as the imports (negative exports) as well as the exports are measured in gross fashion. The table here under shows the results of this survey.

A distinct disadvantage of the SBS is that the merchanting phenomenon also possibly occurs in branches of industry other than wholesale trade.

Table 11

in thousands of euros

Merchanting by wholesalers according to SBS	**sales**			**purchases**			**merchanting fee**		
	2006	**2007**	**2008**	**2006**	**2007**	**2008**	**2006**	**2007**	**2008**
Wholesale mediation	118	71	418	65	76	168	53	-5	250
Wholesale in agricultural products and live animals	1464	6302	8151	1271	6064	7753	193	238	398
Wholesale in food and tobacco products and beverages	3920	2115	2565	3020	1836	2185	900	278	380
Wholesale in consumer goods (non-food)	1578	1017	2965	554	795	2477	1023	221	487
Wholesale in machinery, equipment and supplies	6844	6849	6482	5984	4792	5303	860	2057	1179
Other specialised wholesale trade	17618	17025	23207	17113	16565	22759	505	460	449
Total	**31541**	**33379**	**43788**	**28007**	**30129**	**40646**	**3534**	**3249**	**3142**

The confrontation

Without doubt wholesale trade is the major player in merchanting and Statistics Netherlands is fortunate in that this data is present in the SBS. The results of this survey are grossed up so that the result shows the total merchanting of wholesalers in the Netherlands. But it is also clear that it does not cover all merchanting by Dutch enterprises. The other sources we have at hand, the ITS and ABC deliveries can possibly be used to estimate merchanting for the other branches of industry.

The SBS covers most branches of industry in the Netherlands. In the survey questionnaire that is used in the Netherlands the following two queries are always present:

- What was your turnover of wholesale trade in merchandise?
- What was the purchase value of merchandise used for wholesale sales?

It is plausible to assume that merchanting flows where they are not specifically referred to in an SBS questionnaire will find there way to the two above queries. Using SBS data and the ratio of merchanting to total wholesale trade one can make an estimate of merchanting in other branches of industry.

Table 12

in millions of euros

Merchanting derived from SBS	**2006**			**2007**			**2008**		
	export	**import**	**fee**	**export**	**import**	**fee**	**Export**	**import**	**fee**
Agriculture, forestry and fishing	0	0	0	0	0	0	0	0	0
Mining and quarrying	0	0	0	0	0	0	0	0	0
Food products, beverages and tobacco	558	400	159	314	275	39	475	378	97
Textile and leather products	23	11	12	10	6	4	7	3	4
Wood and glass products and construction materials	10	2	9	2	2	1	4	3	1
Paper and paper products and publishing and printing	3	2	1	2	1	1	2	2	1
Manufacture of petroleum products	2962	2936	26	2255	2242	14	3042	3021	20
Chemicals, man-made fibres and rubber and plastic products	184	110	74	132	112	21	135	125	10
Basic metals and fabricated metal products	40	27	13	29	20	9	48	21	27
Machinery and equipment n.e.c.	268	206	62	247	166	80	324	244	81
Electrical and optical equipment	62	79	-18	82	47	36	72	52	19
Transport equipment	129	115	14	136	123	13	171	158	12
Other manufacturing	30	21	9	7	5	2	20	14	6
Electricity, gas and water supply	-	-	-	-	-	-	-	-	-
Construction	-	-	-	-	-	-	-	-	-
Trade and repair of motor vehicles and cycles	2043	1814	229	2047	1848	199	2476	2299	178
Wholesale trade (excl. motor vehicles/cycles)	31541	28007	3534	33379	30129	3249	43788	40646	3142
Retail trade and repair	116	52	64	27	18	9	41	30	11
Hotels and restaurants	0	0	0	0	0	0	0	0	0
Transport, storage and communication	112	99	13	104	94	10	95	88	7
Financial and business activities	35	31	4	44	40	4	53	49	4
General government	-	-	-	-	-	-	-	-	-
Care and other service activities	0	0	0	0	0	0	0	0	0
Total	**38116**	**33911**	**4205**	**38818**	**35128**	**3690**	**50753**	**47134**	**3619**

Table 12 shows the results of this exercise. The SBS classification of wholesale trade is extremely detailed and can reasonably be linked to specific branches of industry. For example wholesale trade in vegetables and fruit (a separate branch

in wholesale trade) can be linked to vegetable and fruit processing a separate branch within food products. Using the ratio of merchanting to total trade and assuming that the same relationship exists in the branch of industry under scrutiny and that the merchanting fee is of the same order we can make assumptions as to the value of merchanting in other branches of industry.

In the ideal case the SBS statistics will extend their survey questionnaire in order to provide gross data on merchanting. If the questionnaires are not adjusted to these needs, research must be made to find clues to the dispersion of merchanting in other industrial branches. Until then the results of *table 12* must suffice as the level of merchanting in the Netherlands.

In conclusion, it is obvious from the available sources that the value of merchanting in the Netherlands for 2008 is somewhere between 43788 and 50753 million euros on sales and 40646 and 47143 million euros on purchases. For both the sales as well as the purchases these are probably the outer limits. Values shown in the ITS and the ABC deliveries both fall within these ranges.

C. Deliveries between affiliated enterprises

In SNA2008/ESA2010 the cross border movements in merchandise between affiliated enterprises must also meet the condition of change in ownership and if this is not clear the party that assumes the risks and rewards should be designated as owner. ESA1995 contrarily prescribes that a change of ownership be imputed for cross border deliveries between affiliated enterprises.

In the Dutch FTS deliveries between affiliated enterprises are conform the ESA 1995 definition. Beginning 2012 the Dutch FTS will conform to ESA2010. The department of International Trade in goods must do much re-profiling of enterprises to achieve this.

To conform to definitions of ESA 1995 in 2006 – 2007 a large number of enterprises were profiled and depending on the role of the Dutch affiliate, flows were classified either as transit trade or regular trade. This profiling concerned deliveries to a non-resident customer via a Dutch affiliate enterprise. The changed definitions in SNA2008/ESA2010 require a re-profiling of enterprises. FTS expects to start reporting to the National accounts conform the definitions of ESA 2010 for reporting year 2012. For the FTS there is little or no change since the total flows of merchandise trade remain the same (the community concept). There is only a change in the split up between regular trade and transit trade; interconnected vessels. What remains for the national accounts is to determine the correct flows for the years before 2012

After the profiling project in 2006 – 2007, the year 2007 was remade for the national accounts under the two different approaches for the deliveries between affiliates. As with overlapping roofing tiles this enabled the national accounts, which were confronted with a trend break, to at least have at their disposal the correct absolute mutations of merchandise trade. This also enables us to correct the years 2008 to 2011 for the ESA 2010 definitions. The data received from the FTS are so detailed that the affiliated companies can be singled out with their import and export flows per nomenclature number. It is now just a question of transferring these values to the right flows, regular or transit. *Table 12,* below,

shows a summary of the macro totals for the import and export of merchandise in the Netherlands before balancing in the National accounts.

Table 12

			in millions of euros
International trade in merchandise*	**2007**	**2008**	**2009**
according to definitions ESA 1995			
regular imports	289409	319603	258860
transit imports	54996	59056	43695
Total import community concept	**344405**	**378659**	**302555**
regular exports	327470	353293	295415
transit exports	60164	63238	47600
Total export community concept	**387634**	**416531**	**343015**
according to definitions ESA 2010			
regular imports	292088	311602	252946
transit imports	52317	67057	49609
Total import community concept	**344405**	**378659**	**302555**
regular exports	332630	346398	290343
transit exports	55004	70133	52672
Total export community concept	**387634**	**416531**	**343015**

* excluding adjustments below threshold trade

The data in *table 12* covers all goods 'passing' through the Netherlands. Deliveries between affiliates for the purpose of processing will also have a large influence on import and export figures in the national accounts and these are as yet not reflected in *table 12*.

D. Production abroad (Global production)

If complete production units of a domestic enterprise are situated abroad and where economic ownership of raw materials, final products and possibly processes are in hands of the domestic company we speak of production abroad. The production unit abroad need not be an affiliate of the domestic enterprise. Although not specifically mentioned in the new manuals of the SNA2008 and ESA2010 it is clear that the ownership principle applies here and that action must be taken in the spirit of these manuals. Here we will only take into account the ramifications on the cross border transactions. It is clear that there are also consequences for the recording of production and intermediate consumption in the supply and use table.

The difference between processing and production abroad is narrow. Processing entails inputs bought domestically while with production abroad inputs are mainly bought abroad (however also domestically bought inputs can be included). A second difference is that output of production abroad is sold abroad, while with processing it conventionally returns to the mother country (though not always).

The following two diagrams (next page) illustrate an enterprise with production facilities situated domestically as well as abroad.

A short explication of the diagrams and how these flows are momentarily recorded in the national accounts follows:

On the production side

1A. Domestic sales are recorded as such in the supply table; this results from the equation (3A – 2A).

1B. This flow is not recorded in the SBS. It is however recorded in the FTS and services survey as import of merchandise or services and thus finds its way to the use and supply tables. It is not recognised as domestic production (sales).

1C. This flow is presently missed (1A + 1B = 1C). Only 1A is recorded at the moment.

	Production		
	A	**B**	**C**
	domestic production	production abroad	**Total**
1 production sold domestically	domestic sales	domestic sales	∑
2 production sold abroad	export	export	∑
3 total	∑	∑	**Total production enterprise**

	Intermediate consumption		
	D	**E**	**F**
	domestic intermediate consumption	intermediate consumption abroad	**total**
4 raw materials bought domestically	domestic purchases	domestic purchases	∑
5 raw materials bought abroad	import	import	∑
6 total	∑	∑	**total intermediate consumption enterprise**

2A. This flow is captured by FTS and is incorporated in the use table.

2B. This flow is presently not measured in Dutch statistics.

2C. This flow is presently missed (2A + 2B = 2C). Only 2A is recorded at the moment.

3A. This is covered by existing Dutch statistics, the source is the SBS.

3B. This is not covered by Statistics Netherlands except for an untraceable part that ends up in the import (1B + 2B = 3B).

3C. There are no survey's that cover the totals.

It is clear that only column A is presently covered by Dutch surveys.

Intermediate consumption

4D. Purchases are recorded as such in the use table (6D – 5D).

4E. This flow is not recorded in the SBS. It is however recorded in the FTS and services survey as export of merchandise or services and thus finds its way to the use and supply tables; however the values here are not recognised as national intermediate consumption.

4F. This flow is presently missed (4D + 4E = 4F). Only 4D is recorded at the moment.

5D. This flow is captured by FTS and is incorporated in the supply table.

5E. This flow is presently not measured in Dutch statistics.

5F. This flow is presently missed (5D + 5E = 5F). Only 5D is recorded at the moment.

6D. This is covered by existing Dutch statistics, the SBS.

6E. This is not covered by Statistics Netherlands except for an untraceable part that ends up in the export (4E + 5E = 6E).

6F. There are no survey's that cover the totals.

Only column D is covered by surveys.

Source material for the national accounts is for a large part momentarily absent. The only real option for collecting this data is via SBS. Once again an extra burden in these surveys is a sensitive political item.

Ideally the SBS questionnaire should include the following queries:

Production

i. Domestic production
ii. Exports from domestic production (or domestic sales from domestic production)
iii. Production abroad
iv. Export from production abroad, excluding export to the mother country and including sales to the market in the country where the production facility is located.
v. Export from poduction abroad to the domestic market.

Intermediate consumption

i. Intermediate consumption used for domestic production
ii. Imports needed for domestic production.
iii. Intermediate consumption used for production abroad
iv. Imports from the domestic market needed for production abroad
v. Other intermediate consumption.

It should be apparent that when we speak of exports and imports that it is desirable that they be divided into merchandise and services.

These queries will make it possible to amend the merchandise and service flows for the domestic balance of payments:

- On the production side; (ii) is already incorporated in the FTS and (iv) will be added as export.

- Intermediate consumption is somewhat more complex; (ii) is already present in the FTS and the ITS, (iv) is included in FTS and ITS export and must be subtracted. (v) will be added as import.

It would take real stretch of the imagination to expect the SBS to supply this information in a detailed manner (for example in CPA groups). Besides the problem of collecting data to fulfil ESA demands there is also the question of registering these flows in the make and use tables of the national accounts. FTS and ITS statistics are detailed and making amendments in as much detail as these sources usually exhibit is an extremely precarious business. But if one is to balance the various commodity groups in the use and make table an effort must be made.

In the extreme case where the domestic enterprise solely produces abroad and there is no export or import from the domestic market a merchanting like solution would seem appropriate. All production could be booked in one special to be created commodity group and this would all be export (goods and services) while on the debit side all purchases would be imports of goods and services in the same specially to be created commodity group. But once an enterprise operates, not only abroad but also domestically, corrections in the outcomes of existing surveys must be made to meet national account definitions. This is then quite complex as it means subtracting and adding values from the import of goods and services as well as subtracting and adding values to the export of goods and services.

Alluding once again to the diagrams above, the FTS and ITS must be amended for the following items:

- Where there are sales to the domestic market from a subsidiary abroad an amendment must be made to the FTS and ITS import data. The mirror image of this applies when an enterprise abroad situated in the home country sells to its own domestic market a correction must be made in FTS and the ITS export data.

- Where a subsidiary abroad purchases products from the domestic market an amendment must be made to FTS and ITS export data. The same goes for a foreign enterprise producing in the domestic

market that purchases goods and services from its own home country, once again amendments must be made in the FTS and the ITS of the reporting country.

At the moment no data is available on this phenomenon. An expert guess would be groping in the dark. Efforts must be made to collect more information from the SBS. For the reporting years 2010 and 2011 the turnover query has been expanded to include production of enterprises abroad. But more will be needed in SBS reporting to give production abroad firm statistical footing.

In the Netherlands a special department is responsible for data on the 300 largest and/or most complex enterprises in the Netherlands. The purpose of this department is to compile consistent economic statistics at the enterprise level. Production abroad is an aspect that will be dealt with in detail for these enterprises.