

15.C

Re-Export Trade for Hong Kong and the Netherlands

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This section describes the treatment given to re-export trade for Hong Kong and the Netherlands in the GTAP 6 Data Base. Trade data for these countries are not reconciled with partner data using the method described in section 15.B. There are substantial inconsistencies in bilateral partner reports due to high levels of re-export activity. Bilateral trade data for re-exporters originate from the country's own reported data. Hong Kong's reported re-export data are used to make adjustments to Hong Kong's bilateral merchandise and services trade. This was done for the GTAP 6 Data Base as well as previous versions of the data base. However, previous versions of the GTAP merchandise trade did not include specific adjustments to Dutch merchandise trade because of unreported re-export data for the Netherlands. For GTAP 6, the Agricultural Economics Research Institute (LEI) and Netherlands Bureau for Economic Policy Analysis (CPB) provided estimates of Dutch imports, exports, and re-exports at the GTAP sector level.

15.C.1 Re-exports for Hong Kong

Hong Kong reports data under the United Nation's general trade system of reporting. This system of reporting means that Hong Kong provides data for goods of national origin separately from goods originating from other countries and re-exported. The re-export of goods generates services as value is added to goods. Services are exported with re-export goods, which are recorded as the value of re-export margins.

Hong Kong's own exports have declined since 1997 while re-export activity has expanded (table 15.C.1). This implies that the structure of Hong Kong's economy continues to change away from manufacturing to a services-based economy. In order for GTAP data to reflect this change, Hong Kong's production and trade composition of goods and services are adjusted accordingly.

The re-export margin is the difference between the price at which goods are purchased and the price that goods are resold as re-exports. The margins used in the GTAP 6 Data Base are based on previous estimates used in prior versions of the GTAP Data Base.¹ The value of re-exports that are Hong Kong reported in 2001 (\$170 billion) includes a re-export margin. Hong Kong's general

¹Chapter 11.B of the GTAP 4 Data Base documentation provides a detailed description of Hong Kong's re-export markups.

Table 15.C.1 Hong Kong's Reported Total Merchandise Trade 1997-2002 (2001 U.S. \$ Billions)

Year	Re-exports	National Exports	General Exports	General Imports
1997	157	27	184	208
1998	148	24	172	183
1999	150	22	172	177
2000	177	23	201	209
2001	170	20	190	198
2002	183	18	201	207

imports must be adjusted so that they include only retained imports, those imported goods that not re-exported. In order to make this adjustment the re-export margin is subtracted from the reported re-export value. The re-export value, minus the margin, is then subtracted from general imports to produce retained imports. This data manipulation procedure is done at the GTAP sector level. In cases where the import trade flows become negative the margins were adjusted to retain non-negative trade values.

Hong Kong's reported and Hong Kong's adjusted trade values at the sector level are shown in table 15.C.2. As an example, the highest level of re-export activity by sector in 2001 was in electronic equipment (ele) at \$49 billion. The value-added margin for electronic equipment was \$13 billion. Subtracting the margin from re-exports and subtracting re-exports, less the margin, from general imports results in \$24 billion in retained imports for electronic equipment. Total merchandise imports are reduced from the reported \$198 billion in general imports to \$89.8 billion in retained imports.

Merchandise trade re-exported via Hong Kong was placed on a direct trade basis, where the country of origin exports directly to the final destination. This direct bilateral trade, excluding the re-import margin, is added to existing bilateral trade. The re-export margin is exported from Hong Kong as services trade flow to the same destinations where Hong Kong reported its merchandise re-exports.

15.C.2 Re-exports for the Netherlands

The Netherlands reports its data according to the United Nation's special trade system of reporting. This means that the Netherlands, technically, does not record exported goods originating from other countries in its total exports. Reported imports that are not cleared through customs for home use would not be included as imports.² Therefore, under the special trade system data as reported by the Netherlands would be suitable for the GTAP Data Base since exports should not include re-exports and imports are reported as goods for home use only. However, there remains considerable ambiguity

²Under the special trade system, imports include all goods entering the free circulation area of a compiling country, which means cleared through customs for home use, and exports include all goods leaving the free circulation area of a compiling country. Goods imported for inward processing and goods which enter or leave an industrial free zone would not be recorded since they would not have been cleared through customs for home use. The compensating products after inward processing would also not be included in exports.

Table 15.C.2 Hong Kong's Reported and Adjusted Sector Totals (2001 U.S. \$ Millions)

GTAP Sector	Reported Re-exports	Reported National Exports	Reported General Imports	Adjusted Exports	Adjusted Retained Imports
pdr	0	0	0	0	0
wht	0	0	2	0	2
gro	3	0	11	0	9
v_f	352	0	1,092	0	880
osd	7	0	15	0	12
c_b	0	0	1	0	1
pfb	15	0	115	0	105
ocr	196	1	318	2	253
ctl	3	0	62	0	60
oap	542	1	1,202	1	750
rmk	0	0	0	0	0
wol	7	0	5	0	6
for	158	0	158	0	34
fsh	132	8	697	8	192
col	0	0	201	0	201
oil	0	0	0	0	0
gas	0	0	287	0	287
omn	641	0	798	0	121
cmt	227	2	414	3	127
omt	540	2	1,198	1	935
vol	111	6	462	5	331
mil	134	7	385	7	248
pcr	3	0	136	0	134
sgr	7	1	57	0	10
ofd	763	169	2,458	167	1,930
b_t	719	135	1,312	135	797
tex	14,823	3,388	16,775	3,376	5,647
wap	10,692	6,927	11,872	6,907	4,116
lea	12,286	59	11,062	108	10,904
lum	2,000	14	2,344	16	1,011
ppp	2,321	782	3,107	789	1,483
p_c	23	0	105	23	2,868
crp	13,536	923	16,491	935	6,614
nmm	1,025	22	1,879	68	2,092
i_s	1,140	100	2,177	101	1,537
nfm	2,447	792	4,102	792	2,322
fmp	2,929	170	2,989	183	969
mvh	990	6	2,581	6	1,747
otn	793	2	3,186	2	1,896
ele	49,295	3,259	60,036	3,108	24,035
ome	34,011	2,406	34,009	2,485	10,588
omf	16,642	909	13,467	1,065	4,548
Total					
Merchandise	169,515	20,091	197,568	20,292	89,799

in the definition and in the actual data reported. As it stands, it is not clear what types of export and import data are reported as the Netherlands official statistics to the United Nations. Dutch trade data supplied by Eurostat includes all trade including re-exports and are thus consistently higher than COMTRADE merchandise trade totals. The difference in the two data sources is shown in table 15.C.3. Total merchandise trade in 2001 is \$231 billion in Eurostat compared to \$155 billion in COMTRADE using a conversion factor of 0.895 dollars per EURO in 2001. The difference, \$77 billion, is likely attributable to re-exports excluded from COMTRADE. Similarly, total imports in Eurostat data are larger than COMTRADE by about \$57 billion. According to the Netherlands Bureau for Economic Policy Analysis (CPB), Dutch re-exports are about \$75 billion. This value is surprisingly close to the difference between COMTRADE and Eurostat data and thus provides a consistent estimate of the level of Dutch re-exports.

Table 15.C.3 Netherlands Reported Total Merchandise Trade 1997-2002 (2001 U.S. \$ Billions)

	Reported in COMTRADE		Reported in Eurostat	
	Special Exports	Special Imports	Exports	Imports
1997	175	158	207	190
1998	159	153	214	196
1999	160	163	218	206
2000	164	167	232	217
2001	155	158	231	209
2002	173	162	244	219

The CPB estimated that total merchandise exports in 2001 is \$120 billion instead of \$155 billion. This revised total necessitated adjustments in sector level export totals. Sector level export totals provided by the CPB were targeted while preserving the source-destination shares from the COMTRADE data. The adjustments to the sector totals compared with the reported trade totals are shown in table 15.C.4. There were slight adjustments made to most agricultural sectors with the exception of vegetables and fruits (v_f) and oilseed (osd).

As discussed in chapter 15.B. the Netherlands failed to report 2001 gas exports in COMTRADE due to a classification problem. This was not a problem in previous years. Thus, one advantage of having the CPB estimates is in restoring data on gas exports. Major reductions in exports were made to several manufacturing sectors particularly to electronic equipment (ele) and other machinery and equipment (ome). Retained imports were reduced in many of the same sectors where exports were reduced thereby reducing the total from \$158 billion to \$130 billion.

Unlike the treatment for Hong Kong, no estimates were constructed for re-export margins. Thus, trade in Dutch services sectors were not adjusted as a result of changes made to merchandise re-exports. It is assumed that existing exports of trade and transport services are generated from re-export activity and is consistent with data supplied from the Dutch I-O table accounts.

Table 15.C.4 Netherlands Reported and Adjusted Sector Totals (2001 U.S. \$ Millions)

GTAP Sector	Reported Exports	Reported Imports	Adjusted Exports	Adjusted Retained Imports
pdr	5	34	1	34
wht	28	467	22	666
gro	94	420	26	266
v_f	3,656	2,230	1,977	1,345
osd	369	1,579	3	1,174
c_b	1	2	4	1
pfb	0	9	1	15
ocr	4,618	2,232	4,078	2,093
ctl	103	70	222	125
oap	1,142	413	1,008	355
rmk	0	0	0	0
wol	6	5	1	4
for	122	234	3	255
fsh	325	264	311	148
col	577	1,220	577	1,220
oil	15	10,805	15	10,798
gas	0	2,009	5,864	1,200
omn	568	924	414	779
cmt	965	505	1,883	1,128
omt	3,022	920	2,659	856
vol	1,545	1,386	1,068	744
mil	3,464	1,745	3,485	1,554
pcr	50	42	52	76
sgr	118	105	156	61
ofd	8,663	4,224	9,343	4,823
b_t	4,460	1,624	4,268	1,523
tex	3,018	3,480	1,501	2,808
wap	1,805	3,453	330	3,551
lea	1,199	1,797	137	1,631
lum	1,195	3,426	355	2,092
ppp	4,276	4,509	4,186	5,714
p_c	644	510	9,342	3,913
crp	31,560	23,267	26,469	19,693
nmm	1,267	1,755	1,235	2,148
i_s	2,763	2,641	3,437	3,334
nfm	2,698	2,908	2,690	2,872
fmp	3,371	3,583	4,562	3,822
mvh	8,497	12,215	5,683	11,755
otn	2,865	2,944	2,260	2,331
ele	29,968	32,832	7,879	14,477
ome	22,980	22,007	8,827	10,230
omf	2,549	2,483	3,671	7,956
Total				
Merchandise	154,569	157,278	120,003	129,569

Note: Adjusted sector totals were targeted based on estimates provided by the CPB.