

Chapter 8

Bilateral Time-Series Trade Data

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This chapter provides information on the availability of data and the procedure for constructing the bilateral time-series trade dataset. The difficulty in assembling bilateral time-series trade data is in maintaining consistency across all historical years for the GTAP regions and sectors. Time-series trade data for the GTAP 6 Data Base were shortened from previous versions due to lack of historical trade flows for new country breakouts¹.

8.1 Commodity Classification Systems

A major advantage of the Harmonized System (HS) classification is the level of commodity detail providing consistent aggregates with GTAP sectors. However, the HS classification was not widely used by countries until after 1995 (table 8.1). In 1992 less than half of reporting countries reported their trade on the HS system. Although the HS classification has greater commodity detail, there were less trade records reported in 1992 under the HS system than the Standard International Trade Classification (SITC) revision 3 (table 8.2). This is due to a higher number of countries reporting on the SITC than on the HS system at that time. The number of trade flows reported under the HS system, 6.8 million in 1992, increased dramatically to 16.7 million by 2001 (table 8.2). The short history of countries using the HS classification system places limits for its use in constructing a consistent time-series for GTAP bilateral commodity flows. The increase in the number of transactions reported reflects both the commodity detail and the number of reporting countries using the HS classification system. The SITC classification provides better time-series in terms of country coverage than the HS system. As with previous versions of time-series trade data for GTAP, historical trade data is based on the SITC classification.

8.2 Regions and Availability of Historical Data

There are several regional groupings in the GTAP 6 Data Base where historical commodity flows are not available. Key GTAP countries listed in table 8.3 are problematic for obtaining historical data. The countries belonging to the South African Customs Union (SACU) were not available as partners or reporters until 2000. Prior to this, trade data were recorded only for the aggregate SACU region.

¹Editor's note: This chapter documents time-series trade data for 1992-2002 provided by the author for the 87 regions in the GTAP 6 Data Base. The TSTRADE.HAR auxiliary file included in the GTAP 6 Data Package actually includes time-series data for 1965-2002. The data for 1965-1991 were extracted from the time-series trade dataset for 1965-1998 from the GTAP 5 Data Base. The original 1965-1998 dataset, provided by Mark Gehlhar for the 66 regions of the GTAP 5 Data Base, was adjusted by introducing zeroes for new regions. Therefore there are discontinuities in the combined dataset for the new regions introduced since GTAP 5 and also in the data for the composite ("Rest of ...") regions.

Aggregate data for SACU from 1992 to 1999 are reported under South Africa. Historical trade flow data for Belgium and Luxembourg, treated as separate countries, did not become available until 1999. For the Czech Republic, Slovakia, and the Rest of Europe, partner trade flows began in 1993 when they became official statistical partners and reporters with other countries.

Although trade flows were reported for the aggregate Former Soviet Union as far back as the 1960s, individual Former Soviet States did not officially become trading partners or reporters with other countries until 1992. Trade data among the member states of the Former Soviet Union were did not become available until the year the countries became reporters themselves. For example, trade between the Russian Federation and the Rest of Former Soviet Union begins in 1996 when Russia began reporting its trade.

There are missing or sporadic time-series flows between regions as a result of non-reporting countries. As indicated in table 8.3, Rest of Europe as well as the Rest of the Former Soviet Union, includes some non-reporters. For example, Bosnia Herzegovina remains a non-reporting country. In the Rest of Former Soviet Union, Uzbekistan remains a non-reporter.

8.3 *Re-exports in Time-Series Data*

The treatment of re-exports for the time-series data was handled in the same way as re-exports data for the base year (see chapter 15.D). Both Hong Kong and the Netherlands exports in the time-series are exports excluding re-exports. Import flows include only imports not destined for further re-exports in these countries

Table 8.1 Time-Series Trade Data, Country Availability by Classification Systems for Selected Year

Year	SITC Rev1	SITC Rev3 (number of countries)	HS92
1965	87	0	0
1975	131	0	0
1985	111	0	0
1990	113	68	31
1992	112	90	55
1995	133	123	116
1997	143	137	135
2001	151	151	148

Table 8.2 Time-Series Trade Data, Availability by Classification Systems

Year	SITC Rev1	SITC Rev3 (millions of records)	HS92
1965	2.5	0	0
1975	3.9	0	0
1985	4.3	0	0
1990	5.1	7.5	4.1
1992	5.5	9.7	6.8
1995	6.6	11.9	12.7
1997	7.4	13.3	14.7
2001	8.3	15.7	16.7

Table 8.3 Changes in Country Availability Affecting GTAP Time-Series Trade Data

GTAP Region		Available as Partner	Available as Reporter
BWA	Botswana	2000	2000
ZAF	South Africa	2000	2000
XSC	Rest of South African Customs Union	2000	2000
BEL	Belgium	1999	1999
LUX	Luxembourg	1999	1999
CZE	Czech Republic	1993	1993
SVK	Slovakia	1993	1994
HRV	Croatia	1992	1992
SVN	Slovenia	1992	1992
XER	Rest of Europe	1992	<i>na</i>
EST	Estonia	1992	1995
LVA	Latvia	1992	1994
LTU	Lithuania	1992	1994
RUS	Russian Federation	1992	1996
XSU	Rest of Former Soviet Union	1992	<i>na</i>
DEU	Germany	1991	1991

Note: *na* indicates that not all countries in region are available as reporters.