

A BILATERAL TRADE MODEL FOR THE *INFORUM* INTERNATIONAL SYSTEM: MODEL STRUCTURE AND DATA ORGANIZATION

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This paper describes our ongoing project to build a bilateral trade model into the present *INFORUM* international system. The first section of the paper is a brief background introduction to the project. The second section of the paper focuses on the structure of the bilateral trade model. The last section concerns major data preparations involved.

1. BACKGROUND

The *INFORUM* system of macroeconomic, dynamic input-output models has been producing annual forecasts and analyses of public policy since 1979. Models for the United States, Canada, Japan, South Korea, and major EC countries are currently linked to one another through trade flows and prices, with the model for China under development. It appears to be the only system that links, at the detailed industry level, national models which work at or near the maximum number of sectors supportable by the national input-output tables and other necessary statistics. Over the years, the *INFORUM* system has been at the forefront of using input-output models for government analysis and business forecasting. For example,

- The system is used to provide the U.S. model, **LIFT**, with forecasts of foreign prices and demands for U.S. exports by sector.
- The Canadian and USA models were used by the Canadian government (Department of External Affairs) in a study of the impacts of alternative free trade agreements between the U.S. and Canada on the Canadian economy.
- The USA and Mexican models were used by the U.S. Labor Department to conduct the first comprehensive study on the industrial effects of a Free Trade Agreement between Mexico and the USA.
- The Department of Commerce has used the USA, Canadian, and Japanese models to show the embodiment of R&D expenditures in exports, imports and domestic consumption.
- The DuPont Corporation used the Japanese, German and USA models to determine where their products (nearly all intermediate in nature) ended up in final demand.
- The Bank of Tuscany (Florence, Italy) has used the system to study the impacts of the 1985 fall of the dollar on each of the economies in the system.
- The Federal Chamber of Commerce of Austria has used the system to explain to its members the exposure of its member firms to international fluctuations in exchange rates and oil prices.

Though successful in addressing bilateral trade issues and other economic problems in an international perspective, the present linked system does not offer true bilateral trade flows at the sectoral level. It does not show Japanese semi-conductor exports to the U.S., for example. Rather, it connects the total semi-conductor exports of Japan to a weighted average of the semi-conductor imports of all the other countries in the linked system and to the ratio of Japanese

export prices to a weighted average of domestic semi-conductor price in the other partner countries, as shown here:

$$e_t = (b_0 + b_1 \sum_k \frac{W_k m_{k,t}}{m_{k,0}}) (\frac{p_t}{f_t})^\eta \quad (1)$$

where

- e_t Japan's exports of semi-conductors in year t
- W_k the fraction of those exports which went to country k in the base year of the national model
- $m_{k,t}$ imports into country k of semi-conductors in year t
- p_t/f_t a moving average of domestic over foreign prices of semi-conductors in year t
- b_0 , b_1 , and η are the estimated parameters specific to Japanese semi-conductors.

The foreign price, f_t , is a weighted, exchange-rate-adjusted price of competing exporters. It is defined as follows:

$$f_t = \sum_k \frac{s_k p_{k,t} r_{k,t}}{p_{k,0} r_{k,0}} \quad (2)$$

where

- s_k country k's share of world exports of semi-conductors in the base year of the national input-output table
- $p_{k,t}$ domestic price index of semi-conductors in country k in year t; and
- $r_{k,t}$ exchange rate of country k in year t, where the exchange rate is defined as home currency units per unit of foreign currency.

Though the relation, a regression equation, works at the industry level -- semi-conductor -- it says nothing about bilateral trade. That is, it does not say how much of Japanese semi-conductors is going to the U.S., how much to France, or how much to Germany. Conversely, the import functions do not specify from which countries the imports come. While the trade flows in the models are probably not highly inconsistent with one another, they lack the rigorous accounting consistency that a bilateral trade model would offer. They also lack, of course, the bilateral trade flows which, in their own right, are highly interesting to business.

Moreover, some of the parameters in the system still rely on the twenty-year-old estimates in *The Trade Model of a Dynamic World Input-Output Forecasting System* (Nyhus, 1975). The Nyhus study was intended to provide the linking mechanism for the *INFORUM* international system of national models. Unfortunately, at that time the national models were not ready to use the linking model. Now the national models have grown in number and scope, but the linking model has not been updated. The purpose of this project is to bring all current *INFORUM* national models together with a thoroughly up-to-date bilateral trade model.

2. THE BILATERAL TRADE MODEL

In short, the central role of the bilateral trade model in the linked system is to produce forecasts of trade that are consistent from country to country. The trade model will allocate each country's forecast imports to their source countries in accordance with commodity trade-shares matrices. The sum of all the allocations of a particular product to one country then yields a consistent forecast of exports of that country.

In 1975, Douglas E. Nyhus built the first, and by far still the most comprehensive, trade model in advance of most of the national models it was to be linked. Using OECD (Organization for Economic Cooperation and Development) data of international trade in SITC (Standard International Trade Classification) by commodity of origin and destination for the 1962-72 period, he estimated price elasticities for 119 sectors, for a number of countries, including the United States, Canada, Japan, France, Germany, Italy, the Netherlands, Belgium-Luxembourg and United Kingdom. The linked international system, as envisaged in the Nyhus study, would work like a solar system, in which the trade model is treated as the sun and the country models as the planets. The "sun" draws imports and absolute domestic prices to itself and radiates exports and world prices back to the "planets." Market-clearing world prices and exports are determined simultaneously through an iterative solution process. The full linking mechanism would involve two steps. In the first step, exports (by commodity) of one country would be related to imports (by commodity) of its customer countries. In the second step, imports of a commodity by a country would be related to that country's use of the commodity and to relative foreign and domestic prices for that commodity.

Unfortunately, this linking plan has never been really implemented. The principal reason was the trade model's heavy reliance on the role of prices in the determination of the country of origin for imports. The national models have been relatively slow in their development of price forecasts, because the price forecasts are usually developed only after the "real" constant-price part of the model has been working for some time. At the end of 1984 only the models of the United States, Japan and Italy had domestic prices as an integral part of the forecasts each produced. By now, of course, domestic price projections are available in all *INFORUM* national models except for Belgium.

There was also the difficulty to acquire bilateral trade data beyond the 1962-72 period examined in the Nyhus study. The Nyhus trade model was based on OECD data which was obtained with OECD permission but without payment to OECD. Soon after its publication, OECD changed its policy and began requiring payment of \$2,500 per year for the data, thereby closing down academic research that relied on the data. Only recently has it been possible for *INFORUM* to acquire, either outright or in the form of a right to use, a sufficiently large set of OECD trade data to begin incorporating a bilateral trade model into the international system.

The basic structural decisions about the bilateral trade model center on:

- Which countries to include;
- What data sources to use and what product classes to have in the sectoring plan of the trade model;
- What form of trade-shares equations to employ.

Countries to Include

As mentioned earlier, the main focus of the bilateral trade model is the 13 active *INFORUM* national models, including the United States, Canada, Mexico, Belgium, France, Germany, Italy, Spain, Austria, the United Kingdom, Japan, South Korea, and China. However, the data preparations will be done in a way that facilitates possible future inclusion of other OECD countries, East European countries, South Africa, the Middle East and other developing Asian countries, and major South American countries.

Data Sources and Sectoring Plan

The main data source is the bilateral trade data tapes prepared by the OECD for its 24 member countries. For each of the OECD countries, data on imports and exports with nearly 200 trading partners worldwide are available by complete 5-digit SITC in both values at current dollar prices and quantities.

The OECD data is supplemented with data from the UN for the bilateral trade of the Non-OECD countries for which active models exist and will be linked in this study, mainly Korea, Mexico and China. The UN sells these data at \$4 per 1000 data points, or about \$30 per country per year. The bilateral trade data of Taiwan are obtained from Taiwan.

There are over 3000 products defined in the 5-digit SITC, Revision III (Revision II and Revision I have slightly less product detail). The 3000 include both manufactured and non-manufactured products. Such detailed data, for example, allow one to create trade matrices of detailed high-tech electronic goods such as computers and semiconductors or such metal products as copper and aluminum. As the existing *INFORUM* national models generally have some 30 to 100 industrial sectors, 120 sectors have been aggregated from the 3000 product classes for the bilateral trade model so as to be comparable with the sectoring plans of the national models.

There will be, of course, the perennial problem of the fact that the data for A's exports of product *i* to B are not the same as B's imports of *i* from A. Errors due to differences of concept, differences in valuation, timing gaps (recording of imports happens later than recording of exports), differences in methods of calculation, exports of ships to open-registry countries, etc. all contribute to the discrepancy. Fundamentally, we will rely on the *import* statistics, but will attempt to judge the magnitude of the problem and may make compromises between export and import statistics if necessary. The decision to use imports to construct trade matrices is based on the understanding that import data tend to identify the origin better than export data identify the destination, largely because imports loom larger in the collection of customs revenue.

In addition to the trade-flow data, it is necessary to obtain prices series and data on some non-price factors for each country. Prices and non-price data will have to come from individual national sources. Prices, in particular, are fairly readily available from the thirteen national models. The national sources do not, of course, have exactly the same sectoring plan as the linking trade model, so "bridges" (classification conversion schemes) will be built between them.

Exchange rates is also needed in order to make the domestic prices indices comparable from one country to another. The exchange rate given by International Monetary Fund's *International*

Financial Statistics Yearbook is chosen because the U.S. dollar is used as the numeraire and the bilateral flow data are in U.S. dollars.

The Linking Equations

Once the bilateral trade model is completed, the new *INFORUM* system is expected to work as follows. First, each national model makes a forecast in its own currency and in its own classification scheme. In particular, forecasts of imports and domestic prices are produced in the national classification system. These values would then pass through a classification conversion process to get imports and prices in a common international classification as in the trade model. The bilateral trade model would allocate the forecast imports among exporters using its estimated import share matrices. The sum of all the allocations of a particular product in the trade model to one country yields a consistent forecast of exports of that country. The trade model also gives "world prices" as seen by each importing country for each trade model sector. Once again classification conversion schemes are used to convert exports and world prices from the trade model to the national models. Here, another channel of linkage between the trade model and the national models comes into play, as world prices are used in the calculation of domestic prices as they enter through the cost of imported materials. They are also used in the import functions, where the national models decide the proportion of demand to be supplied by imports and the proportion to be supplied by domestic producers.

Key to this linkage mechanism is the allocation of imports of each country to their source countries. The import share matrices (S) that are used to accomplish the allocations are derived from the trade flows matrices (M). There is one M for each commodity. Each M is square and has as many rows or columns as there are countries in the trade model. The i^{th} row of an M shows the exports of country i to each of the other countries. The diagonal elements are all zero, except for the "rest of the world", where all other countries not in the trade model are aggregated together to obtain intraregional flows. The total imports of country j are given by the column sum $M_{.j} = \sum M_{ij}$, and total exports of country i is the row sum $M_{i.} = \sum M_{ij}$. The matrix of market share S_{ij} is thus obtained by dividing each column of M by its column sum. Hence, S_{ij} is the proportion of goods from country i in country j 's imports.

The main task of the bilateral trade model is to forecast the S matrices. The basic form we expect to use for the share of country i in the imports of a given product into a given country, S_{ij} , is

$$s_i = a_i \left[\frac{p_i}{p_w} \right]^{\beta_i} \quad (3)$$

where p_i is the price of this product coming from country i as seen in the given country for each year, and p_w is the world price of that commodity as seen in that country. The phrase "as seen in that country in that year" means adjusted for exchange rates and possibly with a distributed lag. Thus the Spanish price as seen in Germany in 1990 may be a weighted average of the price of the Spanish product in Deutschmarks over several recent years. The world price, p_w , is determined so that the shares of all countries add up to 1.0, namely

$$\sum_{i=1}^n s_i = \sum_{i=1}^n a_i \left[\frac{p_i}{p_w} \right]^{\beta_i} = 1. \quad (4)$$

It is possible to solve this equation analytically for the world price only in the special case that all the β_i are all the same. That case gives the widely-used formulation of Armington. The Armington case is unnecessarily restrictive, for it is not difficult to solve the above equation numerically for the world price. Its estimation, however, requires non-linear methods, since the world price is a complicated function of all the β 's and of any parameters which may enter into the a_i functions. It may be noted that these functions are also the place to include non-price variables such as recent capital investment and relative capacity utilization. Previous experience in estimating the trade share functions has shown that, while prices are certainly useful variables, they explain only half of the movement in the trade shares. Often exports seem to be supply-driven. The rise in the share of Japan in the imports of automobiles in many countries is not to be explained by movements in price indexes as they are reported. Apparently, investment in high-quality manufacturing equipment has resulted in quality changes that do not show up in the price indexes.

3. THE GLOBAL TRADE FLOWS BANK

A major task of this project is to build a global trade flows bank that covers bilateral trade flows between 28 source countries and 60 trading partner countries and country groupings in 120 products for the 1974-91 period. This data work requires the processing of over 200 OECD and UN computer data tapes. Each year of the OECD trade data on average are written on twelve computer tapes -- six of export data and six of import data, and on each tape, a country's trade is arranged by 5-digit SITC commodity and within the commodity it is arranged by trading partner. The UN trade data for Mexico, South Korea and China come on two tapes, and the data on each tape are organized similarly. But to build the global trade flows bank and to create trade flows matrices for the bilateral trade model, there remains a huge task for rearrangement and aggregation of the data that requires considerable computer support in the form of tape reading facilities, disk space, and computer programming skills.

After reading each of these tapes, the data consist of bilateral flows in complete 5-digit SITC from each one of the 24 OECD countries plus Mexico, South Korea, China and Taiwan to about 200 trading partner countries that make up the entire world. The next step is to reduce the number of trading partners from 200 to about 60 by geographic aggregation (see Appendix A), which is relatively straightforward.

On the other hand, the commodity aggregation from the product classes in 5-digit SITC to the 120 sectors of the bilateral trade model requires considerably more efforts, mainly because of the need to reconcile different revisions of the SITC codes and to treat properly the alphanumeric codes in the data. For the most part of the 1970's, all OECD countries reported the trade data in SITC, Revision I. Then starting in 1978, most OECD countries began to report the data in SITC, Revision II. And in 1988, nearly every country switched again, reporting the data in SITC, Revision III. Obviously, separate conversion tables are necessary to convert the data in different revisions of SITC into the 120 sectors of the bilateral trade model. It should be pointed out that there is no one-to-one conversion from the commodity classification (SITC) into the 120 trade model sectors. There are essentially two ways of dealing with the problem: to assign each multi-industry commodity entirely to the single industry code judged to be most appropriate, or to split them among all the relevant industries. The second solution has been adopted by the Economics and Statistics Department of OECD, the United Nations Statistical Office and the World Bank, who jointly developed a conversion table. This table distributes each multi-industry 5-digit SITC commodity among the relevant 4-digit International Standard Industry Classification (ISIC) codes according to the industrial composition of trade by Common Market countries in 1975. This conversion table, however, can be criticized because it applies the same fixed allocation factors for all years and to trade by all countries (including non-EEC Members). While the second method is clearly unsatisfactory, it nevertheless appears preferable to the alternative approach of allocating multi-industry commodities in their entirety to the single most appropriate industry. It may be noted, in any event, that only a minority of SITC codes are multi-industry, and that most commodities can be unambiguously allocated to ISIC industries. The conversion table is then modified to include some non-manufacturing industries and to have further breakdown in some of the manufacturing sectors. For example, computers and accessories are separated from office machinery, while motor vehicles parts are separated from motor vehicles. In the end, there are 120 sectors distinguished in the trade flows data bank.

The treatment of the alphanumeric SITC codes in the data also warrants some explanation. First, the OECD introduces a letter other than A or P at the position where the national code differs from the SITC description. For example, on data from Austria, the OECD lists all commodities of group 251 not available separately under code 251BB. Second, with regard to retaining confidentiality in all or part of the SITC at detailed levels, and the divulgence of trade at higher levels by origin or destination, the OECD has adopted a rule whereby only complete data are given at the less detailed level of the SITC, including a complete geographic breakdown. The statistics are treated by a program which subtracts the confidential data given at a more detailed level in the same class. The remainder is recorded on the tape in an alphanumeric codification ending in one to four letters A. For example, a reporting country provides the OECD with data from division XX with complete geographic breakdown. These data are treated and recorded on the tape under the code XXAAA. In adding up the data recorded under XXAAA and all other data under headings beginning with XX, the total equals that of division XX as provided by the reporting country. When the reporting country provides total value without a complete geographic breakdown at a detailed level, the difference is recorded under the geographic code "secret" under number 8210.

The presence of the alphanumeric commodity codes might not be of great concern had it not been the case that tens or even hundreds of alphanumeric commodity codes appear in nearly all OECD countries in all years of the 1974-91 period. The pervasiveness of alphanumeric codes in the OECD data has led to the following treatment that reallocates the data in alphanumeric codes back into the regular 5-digit SITC codes. First, for alphanumeric codes ending with A's, the iterative RAS procedure is used to allocate a reporting country's data to its respective trading partners under the regular 5-digit SITC codes of the same less-detailed heading such as 51. For example, the data reported in 792AA and in all 5-digit SITC codes under heading 792 are used to construct a matrix, with the commodity codes across the top of the column and trading partners down the side. And the RAS procedure then would be able to eliminate the alphanumeric code 792AA and the "secret" trading partner 8210, without altering the total value of the data under heading 792. Second, for alphanumeric codes ending with letters other than A, a reporting country's data are directly distributed to its respective trading partners by the share of each regular 5-digit SITC code under the same heading.

Then, by commodity aggregation, the number of product classes is reduced to 120, which forms the sectoral detail of the global trade flows data bank.

The next step is to create the trade flows matrices covering the 13 countries for which active *INFORUM* national models exist, plus Taiwan, whose *INFORUM* model is currently under development, and the rest of the OECD (ROECD) and the rest of the world (ROW). As there are 18 years of data and 120 sectors in the global trade flows bank, the total of the 16 x 16 trade matrices becomes 2160 (= 120*18).

In constructing the trade flows matrices, the import data of the 24 OECD countries plus Mexico, China, South Korea and Taiwan are used to fill the first 15 columns. In the last column, imports of the rest of the world from the fifteen countries and regions are derived from the export data of the fifteen countries and regions. Finally, total world imports by the 120 sectors of the bilateral trade model are required to "close" the matrices, that is, to calculate the bilateral trade flows between the ROW and the ROW. These are aggregated from total world imports in 3- or 4-digit SITC as published in the United Nations' *International Trade Statistics Yearbook*.

APPENDIX A

INDUSTRY AND COUNTRY DETAILS OF THE GLOBAL TRADE FLOWS BANK

The global trade flows bank contains bilateral trade flows in 120 products between 28 source countries and 60 trading partner countries and regions of the entire world for the 1974-1991 period.

1. The 120 Industries

<i>Industry Number</i>	<i>Sector Title</i>
1	Unmilled cereals
2	Fresh fruits and vegetables
3	Other crops
4	Livestock
5	Silk
6	Cotton
7	Wool
8	Other natural fibers
9	Crude wood
10	Fishery
11	Iron ore
12	Coal
13	Non-ferrous metals
14	Crude petroleum
15	Natural gas
16	Non-metallic mining
17	Electrical energy
18	Meat
19	Dairy and eggs
20	Preserved fruits and vegetables
21	Preserved seafood
22	Vegetable and animal oils and fats
23	Grain mill products
24	Bakery products
25	Sugar
26	Cocoa, chocolate,etc
27	Food products n.e.c.
28	Prepared animal feeds
29	Alcoholic beverage
30	Non-alcoholic beverage
31	Tobacco products
32	Yarns and threads
33	Cotton fabric
34	Other textile products
35	Floor coverings

36	Wearing apparel
37	Leather and hides
38	Leather products ex. footwear
39	Footwear
40	Plywood and veneer
41	Other wood products
42	Furnitures and fixtures
43	Pulp and waste paper
44	Newsprint
45	Paper products
46	Printing, publishing
47	Basic chemicals ex. fertilizers
48	Fertilizers
49	Synthetic resins, man-made fibers except glass
50	Paints, varnishes and lacquers
51	Drugs and medicines
52	Soap and other toilet preparations
53	Chemical products n.e.c.
54	Petroleum refineries
55	Fuel oils
56	Product of petroleum
57	Product of coal
58	Tyre and tube
59	Rubber products,n.e.c.
60	Plastic products,n.e.c.
61	Glass
62	Cement
63	Ceramics
64	Non-metallic mineral products n.e.c.
65	Basic iron and steel
66	Copper
67	Aluminum
68	Nickel
69	Lead and zinc
70	Other Non-ferrous metal
71	Metal furnitures and fixtures
72	Structural metal products
73	Metal containers
74	Wire products
75	Hardware
76	Boilers and turbines
77	Aircraft engines
78	Internal combustion engines
79	Other power machinery
80	Agricultural machinery
81	Construction,mining,oilfield eq
82	Metal and woodworking machinery
83	Sewing and knitting machines

84	Textile machinery
85	Paper mill machines
86	Printing machines
87	Food-processing machines
88	Other special machinery
89	Service industry machinery
90	Pumps,ex measuring pumps
91	Mechanical handling equipment
92	Other non-electrical machinery
93	Radio,TV,phonograph
94	Other telecommunication equipment
95	Household electrical appliances
96	Computers and accessories
97	Other office machinery
98	Semiconductors & integrated circuits
99	Electric motors
100	Batteries
101	Electrical indl appliance
102	Electric bulbs,lighting eq.
103	Shipbuilding and repairing
104	Warships
105	Railroad equipment
106	Motor vehicles
107	Motorcycles and bicycles
108	Motor vehicles parts
109	Aircraft
110	Other transport equipment
111	Professional measurement instruments
112	Photographic and optical goods
113	Watches and clocks
114	Jewellery and related articles
115	Musical instruments
116	Sporting goods
117	Ordnance
118	Works of art
119	Manufactured goods n.e.c.
120	Scraps,used,unclassified

2. The 28 Source Countries and the Corresponding OECD Country Code

<i>Country Name</i>	<i>OECD Country Code</i>
Canada	0100
United States	0200
Japan	0500
Australia	0700
New Zealand	0800
Austria	1000
Belgium-Luxembourg	1100
Denmark	1300
Finland	1400
France	1500
Germany	1600
Greece	1700
Iceland	1800
Ireland	1900
Italy	2000
Netherlands	2100
Norway	2200
Portugal	2300
Spain	2400
Sweden	2500
Switzerland	2600
Turkey	2700
United Kingdom	2800
Former Yugoslavia	3500
Mexico	5130
South Korea	6910
China (Mainland)	6870
China (Taiwan)	6930

3. The 60 Trading Partner Countries/Regions and the Corresponding OECD Country Code

<i>Country Name</i>	<i>OECD Country Code</i>
Canada	0100
United States	0200
Japan	0500
Australia	0700
New Zealand	0800
Austria	1000
Belgium-Luxembourg	1100
Denmark	1300
Finland	1400
France	1500
Germany	1600
Greece	1700
Iceland	1800
Ireland	1900
Italy	2000
Netherlands	2100
Norway	2200
Portugal	2300
Spain	2400
Sweden	2500
Switzerland	2600
Turkey	2700
United Kingdom	2800
Former U.S.S.R	3310
Poland	3350
Hungary	3390
Former Yugoslavia	3500
Rest of Europe	3330 3370 3410 3430 3450 3610 3630 3650 3670 3990
Israel	6150
Other Middle East	6110 6130 6170 6190 6210 6230 6250 6270 6290 6310 6320 6330 6340 6370 6410 6430 6490
Egypt	4070
South Africa	4950
Africa (North)	4030 4040 4050 4060 4080
Africa (East)	4470 4570 4590 4610 4630 4650
Africa (West)	4090 4110 4130 4150 4170 4190 4210 4220 4240 4270 4290 4310 4330 3350 4370 4380 4390 4410 4420 4440 4460
Africa (South)	4480 4490 4510 4530 4550 4570 4590 4610 4630 4650 4670 4690 4710 4730 4750 4770 4780 4790 4810 4830 4850 4870 4910 4920 4930 4990
Mexico	5130
Central America and the Caribbean	5110 5150 5170 5190 5210 5230 5250 5290 5310 5320 5340 5360 5380 5390 5410 5420 5430 5450 5470 5490 5510 5520 5540 5560 5580 5590

<i>Country Name</i>	<i>OECD Country Code</i>
Colombia	5630
Venezuela	5650
Peru	5750
Brazil	5770
Chile	5830
Argentina	5850
Rest of South America	5610 5670 5690 5710 5730 5790 5810 5870 5890 5990
India	6550
Rest of South Asia	6510 6520 6530 6540 6560 6570 6580
Thailand	6630
Malaysia	6750
Singapore	6790
Indonesia	6810
Philippines	6830
Rest of Southeast Asia	6610 6650 6670 6730 6780
China (Mainland)	6870
South Korea	6910
China (Taiwan)	6930
Hong Kong	6950
Rest of East Asia	6850 6890 6960 6990
Oceania	7130 7150 7180 7190 7230 7240 7250 7270 7350 7370
	7430 7450 7550 7990
Unspecified	8110 8150 8310
Secret	8210
Statistical Discrepancy	9998