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GUIDE TO THE PACIFIC RIM TRADE AND
ECONOMIC DATABASE

by

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Studies,
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Administration,
University of British Columbia
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Rapport de recherche

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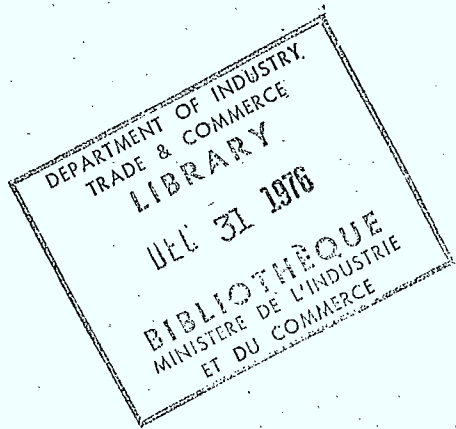


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The views and opinions expressed in this report are those of the author and are not necessarily endorsed by the Department of Industry, Trade and Commerce.

GUIDE TO THE
PACIFIC RIM TRADE AND ECONOMIC
DATABASE

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INTRODUCTION

The PRTEDE has been compiled over the past few years as a source of computer processable data for investigation and assessment of key trade patterns in the Pacific Rim.

The Pacific Rim is broadly defined as including all countries bordering on the Pacific Ocean, or those for whom the Pacific trade route constitutes a significant portion of their national trade. In particular the databank contains Canadian trade volume data for all countries of the world and ancillary economic data for a group of 12 major cross-Pacific Canadian trading partners. Ancillary economic data for the U.S.A. and Latin America have not been added at this time. Major trading partners included are Japan, Hong Kong, Australia and New Zealand. For a complete inventory of countries included for the various data items, see the particular data files.

The major data file, that on Canadian trade volume and values, is derived from Statistics Canada master files and includes yearly exports and imports from 1966 through December 1974, subdivided by commodities, mode of transport, region of origin or destination and region of customs clearance. This data is scheduled for update with 1975 totals in 1976. (For further description of these files see the Trade files section.)

Economic data on the various trading partners is derived from the country of interest, United Nations publications or such other sources as have been found to be adequately reliable. Additions to the files and updating is done as data comes available or as needs warrant.

Availability of the data. The U.B.C. Division of International Business Studies maintains the files in machine readable form on the U.E.C. IEM 370 computer system. Extracts of the data can be made available to users for processing elsewhere in card, 7 or 9-track tape or disk format. Alternatively, the user can arrange, through the Division, to use the U.B.C. Computing Centre to work with the data on site. All data now on files is in the public domain.

Analytic processing capability. The U.B.C. System has available many programs and packages which may be of interest to the researcher. These range from descriptive statistics through multivariate techniques. The Computing Centre staff or the Division of International Business Studies can provide a comprehensive summary of the programs available.

COUNTRY CODE FILE

The country coding used in the databank is chiefly derived from the Statistics Canada coding set which has world wide coverage. Additions, where necessary, have been made to accommodate the changing political patterns. All coding is 3 digit numeric. An alphabetic country name is followed by a 3 digit country code.

The source of the original list is Trade of Canada, Vol. 3, Imports, Statistics Canada publication 65-203. After correspondence with Statistics Canada, additions to the list were made in 1975, involving the coding of countries included in area groupings to make our files more complete.

This coding is contained on an *FS tape as a line file named DCCOUNTRY (sorted in alphabetic order) and DNUMCCOUNTRY (sorted in numeric order). Format = (36A1, 6X, I3) Country name, country code number.

CANADIAN TRADE DATA FILES

Data on Canadian trade with the World from 1966 through 1974 and extracted portions on trade with the Pacific Rim countries.

Exports from Canada to Asia and Oceania, 1966 and 1967
Canadian exports to Asia and Oceania in 1966 and 1967. This includes all countries with code numbers between 500 and 699.

The data includes trade values and quantities where applicable, for five digit commodity classes. Quantities are numeric with alphabetic explanatory codes; values are in Canadian dollars. Countries are coded with the three digit Statistics Canada system.

Data is from Dominion Bureau of Statistics publication 65-003, Export by Countries, for the 4th Quarter of 1967. It was keypunched and verified directly from this publication in 1975 and has been further verified by totalling. This data is not identical to that contained on the major portion of the files as it contains fewer countries, no mode of transport or region of clearance subgroupings, and is in 5 digit rather than 3 digit commodity classifications.

The data is contained on a tape in format which conforms to the other files, but with blanks inserted in the unused fields.

Total Exports from Canada to Asia and Oceania, 1966 and 1967. Total of the detail file above. Data is from D.B.S. Publication 65-003, Export by Countries. The data is contained on an *FS tape in a file named TOTAL.EX.66.67.

Exports from Canada, 1968 through 1974. Canadian exports to the world for each year. Total commodities exported, coded on a 3 digit basis, are included for each country and for Census sub-divisions of the Western U.S.A. Alphabetic fields include descriptions of the commodity group, the country name and volume description. Region of clearance, Region of lading, and Mode of transport form sub-groups of each commodity group.

Data was extracted by Statistics Canada from their master files. This data is scheduled for updating in 1976 with 1975 data.

This file exists in two formats. The original as received from Statistics Canada is on one tape, with 50 record blocks of 4050 characters per block, sorted by commodity. This file contains export values and quantities in packed decimal form,

all other data is in external decimal. The second file is all external decimal and sorted by year within country. Both files are maintained in protected form at the U.B.C. Computing Centre. There are 298,355 records for exports to countries and an additional 39,161 records for the Western U.S.A. in the file up to 1974.

Exports are coded with the Export Commodity Classification as described in Statistics Canada publication 12-521. Country coding is the three digit Statistics Canada system, for which see the file named DCCOUNTRY.

Special coding used in these files:

Region of Clearance or Region of Lading Codes:

- 1= Atlantic
- 2= Quebec
- 3= Ontario
- 5= Pacific

Mode of Transport Codes:

- 1= road
- 3= rail
- 5= water
- 6= air
- 9= other

U.S. Census Sub-division Codes (West):

- 81= Montana, Idaho, Wyoming
- 82= New Mexico, Arizona
- 83= Colorado, Utah, Nevada
- 91= Alaska, Oregon, Washington
- 92= California, Hawaii

The data is contained on labelled tapes. Format (I3, 2X, I3, I2, 3I1, I2, I11, I12, 1X, 5A1, 35A1, 14A1) = Export commodity class (3 digits), Country code (3 digits), Western United States census sub-division (where applicable), Region of clearance, Region of lading, Mode of transport, Year, Quantity exported, Value of exports, Unit of quantity, Export commodity description, Country description.

The data file was purchased in February 1975. Expansion to all unpacked fields was done in April 1975, via a program written by Robin Russell, U.B.C. Computing Centre.

Imports to Canada, 1966 through 1974. Imports from all countries in the world to Canada, 1966 through 1974. This data is similar to the 1968-1974 Export data above. Quantities and values of all imports by Import Commodity Class (5 digits in this case) are given by region and province of clearance for each year. Alphabetic quantity codes, description of commodity and country name are included in each record.

The data was extracted by Statistics Canada from their master files. This data is scheduled for updating in 1976 with 1975 data.

This file exists in two formats. The original as received from Statistics Canada is on one tape, with 50 record blocks of 4050 characters per block, sorted by commodity. This file contains import values and quantities in packed decimal form, all other data is in external decimal. The second file is all external decimal. Both files are maintained in protected form at the U.B.C. Computing Centre. There are 596,432 import records on the file through December 1974.

Coding for Region of Clearance is the same as for the Exports above. Imports are coded with the Import Commodity Classification as described in Statistics Canada publication 12-524. Country coding is the three digit Statistics Canada system, a key to which is contained in the file DCCOUNTRY.

Province of Clearance Coding:

X= Newfoundland
0= Nova Scotia
1= Prince Edward Island
2= New Brunswick
3= Quebec
4= Ontario
5= Manitoba
6= Saskatchewan
7= Alberta
8= British Columbia
9= Yukon

The data is maintained on tape. Format (I5, I3, 2X, 2I1, 1X, I2, I11, I12, 1X, 5A1, 35A1, 14A1)= Import commodity class (5 digits), Country code (3 digits), Region of clearance, Province of clearance, Year, Quantity imported, Value of imports in Canadian dollars, Unit of quantity, Import commodity description, Country description.

Conversion of files to all external decimal done in August 1975 via a program written by Robin Russell at the U.B.C. Computing Centre.

Extracted Exports and Imports . The master files have been extracted to produce a more manageable data file for Pacific Rim use. These files are in external decimal and sorted by country and year of export or import. They are maintained on tape and are otherwise like the files above.

IMPORTS FROM U.S.A AND LATIN AMERICA

Imports to Canada as a whole and to the "Pacific" trading area from U.S.A. and from Latin America for 1971, 1972, and 1973. Data source is Statistics Canada publication 65-203; Imports, Merchandise Trade, 1971-73; Table 4: "Imports by Division and Trading Area." Detail is included for all two digit commodities for 1971 to 1973.

Data is contained on an *FS tape in a line file named IM.US/LATAMER. Format = (2I2, 4(3F6.0)) SCC 2 digit commodity (or range); Imports from USA to all Canada 1971, 1972, 1973; Imports from USA to Pacific Canada 1971, 1972, 1973; Imports from Latin America to all Canada 1971, 1972, 1973; Imports from Latin America to Pacific Canada 1971, 1972, 1973. All values are in thousands of Canadian dollars. Data collected in 1975.

HIGH VOLUME COMMODITY TRADE WITH U.S.A., U.K., AND JAPAN

Summary of exports from Canada and imports to Canada of high volume commodities in trade with the U.S.A., U.K., and Japan for 1970, 1972, and 1974. Data includes totals of key groupings and percentage of the total high volume trade.

The data is contained on an *FS tape in a line file named EX.IM.UK.JA.US. Format = (I5, 5X, 3F13.0, 11X, 3F10.3) Commodity group number, 1970, 1972, 1974 imports or exports, Percentage of total value for 1970, 1972, and 1974.

Commodity groups included in Export data are

1. Passenger Cars,
2. Parts and Engines
3. Lifting and Loading Machinery
4. Harvesting Machinery
5. Nickel Ore Concentrates
6. Copper Ore Concentrates
7. Iron Ore Concentrates
8. Coniferous Shaped Lumber
9. Wood Pulp
10. Aluminum Alloys
11. Copper and Alloys
12. Nickel Alloys
13. Newsprint
14. Steel Plate and
15. Total High Volume Exports.

Commodity groups included in Import data are

1. Parts and Engines
2. Passenger Cars
3. Lifting and Loading Machinery
4. Lifting and Loading Equipment Parts
5. Pumps
6. Heating and Cooling Equipment
7. Construction and Mining Equipment

8. Printing and Binding Machinery
9. Office Machines
10. Tractors
11. Harvesting Machines
12. Woven Synthetic Materials
13. Synthetic Fibres
14. Woven Bleached Cotton
15. Iron and Steel Plate
16. Iron and Steel Bars
17. Iron and Steel Tube
18. Architectural Metal Products
19. Tools
20. Nuts and Bolts
21. Total High Volume Imports.

The raw data for this file contains data on the individual commodities making up this table for the years 1966 to 1974. That data is contained on a blocked tape in the same format as the master files. The selection program used to derive the data is contained on an *FS program tape. This file, itself, cannot be directly input as it contains headings for the table as part of the line file.

CANADIAN RESEARCH AND DEVELOPMENT

Canadian total intramural Research and Development expenditures, 1960-1974. Data is from Statistics Canada publication 13-203, Industrial Research and Development Expenditures in Canada, issues from 1969, 1971 and 1972-73. Data was collected for 21 major industrial groups which are listed below.

The data as published is subject to revisions with future publications. In this vein, 1971, 1972 and 1973 data were re-estimated in 1975 on the basis of totals in the 1972-73 edition of 13-203. Data for 1974 was divided on the same basis as 1973 data, again based on the most recent publication. Data from 1971 through 1974 will be revised as better information becomes available.

The file is contained on an *FS tape in a line file named RND.REV. Format= (A2, I3, A2, I2, I11); Ccountry (Canada), Industry code number, Industry mnemonic, Year, Total R&D expenditure for industry.

Industrial Groupings Used.

- 101 Mines
- 102 Gas & Oil Wells
- 103 Food & Beverages
- 104 Rubber
- 105 Textiles
- 106 Wood
- 107 Furniture & Fixtures
- 108 Paper
- 109 Primary Ferrous Metals
- 110 Primary Non-ferrous Metals
- 111 Metal Fabricating
- 112 Machinery
- 113 Aircraft & Parts
- 114 Other Transportation Equipment
- 115 Electric Products
- 116 Non-Metallic Mineral Products
- 117 Petroleum Products
- 118 Drugs and Medicines
- 119 Other Chemical Products
- 120 Scientific and Professional Instruments
- 121 Other Miscellaneous Manufacturing

GOVERNMENT EXPENDITURES FOR TWELVE PACIFIC RIM COUNTRIES

Central government expenditures (and government enterprises unless specified) for various years for twelve Pacific Rim countries. All figures given are in current Canadian millions of dollars (with 1 place decimal thousands). Government expenditures can be classified two ways, economically or functionally.

There are three types of economic expenditures: (1) current -- consumed within the fiscal year; (2) capital formation -- goods not consumed within any one year, buildings, land, etc., net stockpiling or net increases in stock; (3) transfer expenditures (which are not included in this file).

Functional classifications are by use or purpose which does not distinguish among current, capital and transfer expenditures. Basically there are 5 categories of functional expenditure: (1) education; (2) health; (3) other social services; (4) economic services; and (5) defense. Also included is total government expenditures which is the sum of current expenditures, gross capital formation and transfer payments. Exceptions and variations to this are listed separately for each country below.

Country mnemonic; Countries included; Data items; Years (Notes)

CD; Canada; 10, 40, 42, 52, 57, 55, 60, 99; 1954-72 (Functionals only).

AU; Australia; 02, 03, 10, 41, 55, 60, 99; 1958-72 (Fixed capital formation is capital expenditures on new assets of the central government and public trading enterprises only and does not include net increases in stocks).

NZ; New Zealand; 01, 03, 10, 60, 99; 1954-72 (Figures include expenditures by dependent administrative bodies but exclude expenditure by separately constituted government enterprises. Education and defense figures do not include gross capital formation in these areas).

TW; Taiwan; 01, 03, 10, 40, 42, 52, 51, 61, 99; 1954-69 (Figures given include both central and local government expenditures. Functional classifications are for current expenditures only. Capital formation expenditures are excluded.)

PH; Philippines; 01, 03; 1961-72; 10, 41, 51, 52, 54, 60, 99; 1954-72 (Other economic services covers commerce, industry and other economic development schemes.)

KR; Korea; 01, 03, 10, 40, 42, 50, 60, 99; 1954-72.

PA; Pakistan; 02, 04, 11, 60, 99; 1954-72 (Combined functional-economic classification; i.e. Education & health,

and defense are current expenditures only. Includes expenditures by the development and relief fund but excludes transfers to this fund. Capital expenditures includes capital expenditures on railways for 1954-62).

TH; Thailand: 01, 03, 10, 40, 42, 51, 53, 60, 99; 1959-72 (Other economic services includes expenditures involving fuel, power, mineral resources, manufacturing and construction, transport, storage and communication).

IN; Indonesia: 10, 40, 51, 52, 58, 60, 99; 1959-65 (Other economic services includes expenditure on agriculture & allied subjects, industry and mining).

HK; Hong Kong: 10, 41, 50, 60, 99; 1960-70.

MA; Malaysia: 01, 03, 10, 40, 42, 51, 53, 56, 60, 99; 1960-69 (Singapore included in 1964-65 expenditures. Other economic services include expenditures involving fuel & power, mineral resources, manufacturing & construction, transportation, storage and communication).

JA; Japan: 01, 02, 12, 42, 56, 57, 60, 99; 1958-72 (Figures exclude expenditures by government trading and financial enterprises. Current expenditures on goods and services includes outlays for military construction and equipment. Gross capital formation excludes changes in stock. Trade and industrial development excludes expenditures on irrigation, drainage, reclamation of waste land, construction of industrial water services, expenditures on airports, roads, etc. Land conservation and development includes most of the categories excluded from trade and industrial development. In general this category includes expenditures such as investments on roads, harbours, etc., that tend to facilitate industrial activity).

Category of expenditure codes:

01. Gross capital formation.
02. Gross fixed capital formation.
03. Current expenditure on goods & services.
04. Other current expenditures.
10. Education.
11. Education and health.
12. Education and culture.
40. Health.
41. Social services (including health).
42. Other social services.
50. Economic services.
51. Other economic services.
52. Transportation and communication.
53. Agriculture.
54. Agriculture and natural resources.
55. Natural resource development.
56. Land conservation and development.
57. Trade and industrial development.
58. Other development expenditures.
60. Defense.

- 61. Defense and general administration.
- 99. Total expenditures.

Eleven fields of expenditure data in millions of Canadian dollars are to be read in F6.1 format (millions with decimal hundred-thousands). Years covered by each record are indicated by values in cc's 3-4 and 5-6.

Data contained on an *IS tape as a line file named GOVEXPEND. Data collected in 1974. Format= (A2, 1X, I3, 1X, 2I2, 11F6.1, 2X, A4); Country code (alpha), Country codes (numeric), Beginning year, Ending year, 11 years' data, Identifier (GOV).

AID DATAWorld Aid to Nine Pacific Rim Countries

Data on World Aid from OECD countries to nine Pacific Rim countries. Includes World bi-lateral aid, World export credits, and World multi-lateral aid. Data is in U.S. Dollars, and covers the years 1960 through 1972.

Data obtained from OECD publications in 1974.

The data is contained on an *FS tape in a line file named WORLD AID. Format = (A2, 1X, I3, IX, I2, 3(2X, F14.0), 24X, A4); Country mnemonic (alpha), Country code (numeric), Year, Bi-lateral aid, Export credits, Multi-lateral aid, Identifier (AID).

Countries included: Hong Kong, Indonesia, Korea, Malaysia, Pakistan, Philippines, Singapore, Thailand, Taiwan.

Canadian Aid to Twelve Pacific Rim Countries Data on Canadian aid to twelve Pacific Rim countries, 1960-1973. Bi-lateral aid, export credit insurance and are included. Data was obtained from CIDA and is in Canadian dollars. Format = (A2, 1X, I3, 1X, I2, 2(2X, F14.0), 40X, A4); Country mnemonic (alpha), Country code (numeric), Year, Bi-lateral aid, Export credit insurance, Identifier (CAID).

This file is on an *FS tape in a line file named CDNAID. The data was collected in 1974.

Countries included: Australia, Hong Kong, Indonesia, Japan, Korea, Malaysia, New Zealand, Pakistan, Philippines, Singapore, Thailand, Taiwan.

Malaysia's figures include Singapore's for those items marked with * under Export Credit Insurance (to Canadian exporters). From 1960 to 1968 bi-lateral aid via the Colombo Plan was divided into grants and loans. From 1969 to 1972 aid was via the Export Development Corporation divided into (1) Technical assistance and (2) International food aid. In 1971 large scale private investment reached only \$76 million. From 1960 to 1966 Export Credit Insurance was via the Export Development Corporation. There is no data on bi-lateral aid to Taiwan, Hong Kong, Japan, Australia and New Zealand. There was some educational aid to Philippines only, no other data.

EXCHANGE RATES

Units of domestic currency to purchase one Canadian dollar (file EXCHANGE) or one U.S. dollar (file USEXCHANGE) for 25 nations of the Pacific Rim for 14 years. Data was obtained from the International Monetary Fund journal International Financial Statistics : For 1960 to 1962, IFS Vol. 21 #1, January 1968; for 1963 to 1969, IFS Vol. 23, #12, Dec 1970 and also for 1960 to 1962 for El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Philippines, and Thailand; for 1970 to 1973, IFS Vol. 27, #11, Nov. 1974; for 1974, IFS Vol. 28, # 3, March 1975.

Exchange rates were selected for individual countries as follows:

Australia: average buy/sell price to 1966; exchange rate following. Changed from pounds to Australian dollars in 1966. All exchange rates are in terms of their new currency (code # 614).

Brazil: free exchange rates (code # 752).

Canada: spot rate, devaluation in 1967; free float in 1970 (code # 000).

Burma: official rate (code # 545).

Chile: import rate (code # 755).

Columbia: principal selling rate (code # 758).

Costa Rica: official selling rate (code # 845).

Ecuador: official selling rate (code # 763).

El Salvador: official rate (code # 857).

Guatemala: official rate (code # 864).

Honduras: official rate (code # 869).

Indonesia: other import rate (code # 556).

Japan: interbank rate (code # 559).

South Korea: official rate (code # 564).

Malaysia: official rate (code # 524).

Mexico: official rate (code # 874).

New Zealand: average buying/selling rate prior to 1967. Changed currency from pounds to New Zealand dollars in 1967. All exchange rates in terms of new currency. Exchange rate used

following 1967 (code # 622).

Nicaragua: selling rate (code # 879).

Pakistan: selling rate (code # 527).

Panama: official rate (code # 883).

Peru: principal rate (code # 774).

Philippines: official rate (code # 567).

Singapore: official rate (code # 528).

Taiwan: selling rate at month ends (code # 578).

Thailand: selling rate (code # 583).

South Vietnam: official rate (code # 586).

The Canadian data is contained on an *FS tape in a line file named EXCHANGE. The U.S. data is contained on an *FS tape in a line file named USEXCHANGE. Format = (I3, A4, A3, 15F10.5) Country code, 'CD' (or 'US'), Currency denomination, Exchange rates for 15 years (1960 to 1974). Data is units of currency to buy \$1 Canadian (or \$1 U.S.). Data compiled in 1975.

CANADIAN EMPLOYMENTAverage Employment Indexes for Canadian Industries

Data is average employment index for Canada from 1960 through 1968 (1961=100), index of employment as at May, 1961 (census date), number employed as at May, 1961. Data source is Dominion Bureau of Statistics publication 72-201 Review of Employment and Average Weekly Wages and Salaries for average employment indexes; Dominion Bureau of Statistics publication 72-504, Employment Indexes, Average Weekly Wages and Salaries... Jan 1961 - May 1965 for May 1961 employment; and Dominion Bureau of Statistics publication 94-530, Vol. III, Pt. 2, Table 14 (from 1961 census) for number employed in May 1961. Industry detail is included for all industries and groups of industries.

Format= (2I3, 9F6.1, 6X, F6.1, 2X, I6); 1970 SIC code range, Average employment index 1960 to 1968, May 1961 employment index, May 1961 number employed. The data was compiled in 1975. Data is contained on an *FS tape as a line file named EMPLINDEX/60.

Canadian Wage Earners by Occupational Division

Wage earners by occupational division as reported in 1961 Canadian census. Data source is Dominion Bureau of Statistics 1961 Census Publication 94-530, Vol. III, Pt. 2, Bull. 3.2-13, Table 14 "Labour Force & Wage Earners 15 Years of Age and Over, in each industry by occupational division and sex for Canada, 1961."

Data is contained on an *FS tape in a line file named OCCUP61. The file contains complete industry data and data by groups of industries for 1961 only. Format = (2I3, 12I6, I2); 1970 SIC range, Total employed, Managerial, Professional & technical, Clerical, Sales, Service Transportation & communications, Farm, Other primary occupations, Craftsmen & trades, Labourers, Not specified; Year. Data was collected in 1975.

Employees, Scientists and Engineers in Canadian Industries, 1971

Total number of employees and number of scientists and engineers in Canadian Industries in 1971. This data was obtained from Statistics Canada 1971 Census publication 94-758 (3.5-11), Industries by Sex, Showing Occupation Major Groups.

Data was collected in 1975 and is contained on a *FS tape

in a line file named SCIENTISTS. Format= (I3, I2, 2I3, 2I12),
Country code (000 for Canada), year (71), SIC number range,
Total employees, Number of Scientists & Engineers.

STANDARD INDUSTRIAL CLASSIFICATION TITLES

Data source is Statistics Canada publication 12-501, Standard Industrial Classification Manual, revised 1970. Titles are included for all industries and groups of industries. This file has descriptive data on Canadian industries and shows the manner in which they are usually grouped in publications.

INDUSTRY TO COMMODITY CONVERSION TABLE

1970 Standard Commodity Classification to 1970 Standard Industrial Classification to 1960 Standard Industrial Classification. Data source is Statistics Canada publication 12-501, Standard Industrial Classification Manual, Revised 1970, and Statistics Canada 12-503, Standard Commodity Classification Manual, Vol. I. Detail is provided for all two digit commodities and three digit manufacturing industries.

Data is contained on an *FS tape as a line file named SCC/SIC. Another file, named SIC/SCC, contains the same data but sorted into SIC number sequence. Format= (1X, I2, 3X, I3, 3X, 6(I3, A1, 2X)) Commodity Codes, 1970 Industry Codes, 6 possible 1960 industry codes with * indicating when 1960 category was not transferred entirely to one 1970 category. Concordance was developed in 1974.

CANADIAN TARIFFS ON IMPORTED GOODS, 1960 to 1973

Data on Canadian tariffs on goods imported from Pacific Rim Countries. Each country's data is contained on a separate file. Data sources were Statistics Canada Publication 65-006, Trade of Canada, Imports by Countries, Fourth Quarter for each year and Mc Goldrick's, Canadian Customs Tariff and Excise Duties which is published yearly.

Commodities are coded with the Canadian Import Trade Classifications, with tariff numbers from the Customs office as reported in Mc Goldrick's. Tariff amounts in all files are ad valorem unless coded for quantities. Quantity codes indicate that amounts in the file are in volume rather than value and that the tariffs are calculated on the volume basis. Coding for this appears in col. 18 of the data and is coded as follows:

1. Pounds
2. Gallons
3. Hundredweight

Data is on file for the following countries:
Australia, Hong Kong, Indonesia, Japan, Korea,
Malaysia, New Zealand, Philippines, Singapore, Taiwan,
and Thailand.

All data is contained on an *FS tape in line files with names which begin with S.CTARE/ or CTARE/. These two configurations differ in the order in which the data is presented. All files with the prefix S.CTARE/ are sorted by year within commodity; those prefixed by CTARE/ are sorted by commodity within year.

The format in all cases is the same. Format= (I3, 2I7, I1, 5(2F6.0), I2); Country code number, Canadian Import Trade Class number, Tariff number, Volume code (cc. 18), 5 groups of Tariff and Amount data, First year of data in this record. (i.e. The code "65" in the last two columns indicates that the data in columns 19 to 24 is the tariff on this commodity in 1965, data in columns 25-30 is the amount of this commodity imported to Canada in 1965 from this country; the next set will be for 1966.)

FOREIGN TARIFFS ON CANADIAN EXPORTS

Data on Canadian goods exported to countries of the Pacific Rim from 1961 to 1972.

Canada's Exports. Export figures were collected from Trade of Canada: Exports by Countries, 4th Quarter, published by the External Trade Division, Statistics Canada, publication 65-003. The export figures were rounded off to the nearest thousand Canadian dollars. Depending on the size of Canada's exports to individual countries of the Pacific Rim, a cut-off point for each country was selected to assure that more than 90 per cent of the total exports for each year would be covered.

Export commodities grouped as n.e.s. were generally excluded because tariff rates for these miscellaneous items aggregated in one class were not available. Each year the classification of a number of Canada's export commodities was changed. To eliminate bias, the commodity classification number and a description of the commodity were used to collect the export values. The most recent classification numbers are recorded in the data files. The original class numbers and the consequent changes are available in the original data for the respective countries, on file with the Division of International Business Studies.

Certain items excluded in the first few years because they were well below the cut-off point, later became important. These items were included for all years concerned. If it was found that a commodity was included because it met the cut-off point criterion, but was not exported for more than two years, it was excluded, unless the export amounts were significant for the two years.

Conversion of XCC into SITC and BTN. Foreign tariffs on Canada's exports are given according to the Brussels Tariff Nomenclature (BTN). A two-stage conversion process was necessary to convert the XCC numbers, which describe the commodity exported, to the BTN system. The Convertibility Index of Canadian Export Commodity Classification to the Standard International Trade Classification. Prepared for the External Trade Division by the Commodity Intelligence Section, Statistics Canada, Ottawa, and the Commodity Index for the Standard International Trade Classification, revised, Statistical Papers, Series M, No. 38, Vol. 1, United Nations, 1963, were used for this process.

The Foreign Tariffs. The International Customs Tariff Bureau, Brussels, publishes the tariff rates of the respective countries in the International Customs Journal. The Bureau publishes data for countries as major revisions are made to their tariff structures. Data is not available from this source for all countries of the world, hence there are gaps in the tariff information for part of the Pacific Rim.

This data is contained on an *FS tape in line file configuration. As in the Canadian data, each country's data is in a separate file with a name prefixed by FTARF/. Format(2(I5,1X), I4, 2X, 4F6.0, 12F6.0, 1X, I3), XCC code, SITC code, BIN code, 4 years' tariff rates, 12 years' exports beginning 1961, Country code. Countries included in this data set are as follows: Australia, Hong Kong, Japan, South Korea, Malaysia, New Zealand, Pakistan, Philippines, Singapore, and Thailand. Notes for the particular countries are stored in the negative line numbers of the individual files and should be consulted if extensive use is to be made of them. In most cases, tariff rates are ad valorem; the country notes contain reference to the exceptions.

Tariff information is not available for Indonesia or Taiwan, although the export data has been collected for these two countries.

PER CAPITA INCOME FOR PACIFIC RIM COUNTRIES

Income per capita for Pacific Rim Countries in 1970, with data for some countries for 1960, 1963, 1969, 1971 and 1972 was derived from the Yearbook of National Account Statistics, 1973, Vol. 3, "International Tables, Table 1B, pp.9-14, published by the United Nations.

Data is in U.S. Dollars. The data is contained on an *FS tape in line file named INC.PERCAPITA. Format= (I3, 3X, 6I6); Country code, per capita income 1960, 1963, 1970, 1971, 1972. Data was collected in 1975.

NATIONAL INCOME FOR PACIFIC RIM COUNTRIES

National incomes for Pacific Rim Countries in 1970 with data for some countries for 1960, 1963, 1969, 1971 and 1972 was collected from the Yearbook of National Accounts Statistics, 1973, Vol. 3, "International Tables," Table 1B, pp. 9-14, published by the United Nations.

National incomes are in millions of U.S. Dollars. The data is contained on an *FS tape in a line file named NAT'L.INC. Format = (I3, 3X, 6I6); Country code, National Income for 1960, 1963, 1969, 1970, 1971, 1972. Data was collected in 1975.

DOMESTIC MONEY SUPPLY FOR TWELVE PACIFIC RIM COUNTRIES

Data on the money supply in billions of domestic currency for 12 nations of the Pacific Rim for 14 years. The data was obtained from the International Monetary Fund journal, International Financial Statistics (line #34): for 1960, IFS Vol. 20, # 12, December 1967; for 1961 to 1964, IFS Vol. 21, # 12, December 1968; for 1965 to 1967, IFS Vol. 25, # 12, December 1972; for 1968 to 1973, IFS Vol. 28, # 3, March 1975.

The definition of money supply used for each individual country is as follows:

Australia: Reserve money, plus demand deposits, less reserve bank private sector deposits.

Burma: Currency outside banks, plus demand deposits.

Canada: Currency outside banks, plus demand deposits.

Indonesia: Currency outside banks, plus Bank of Indonesia private sector deposits, plus official entities deposits, plus demand deposits.

Japan: Reserve money, plus demand deposits, less reserves (deposit money banks).

South Korea: Currency outside banks, plus demand deposits.

Malaysia: Currency outside banks, plus demand deposits, plus national bank private sector deposits.

New Zealand: Currency outside banks, plus demand deposits, plus reserve bank private sector deposits.

Philippines: Currency outside banks, plus demand deposits.

Singapore: Currency outside banks, plus demand deposits.

Taiwan: Currency outside banks, plus demand deposits.

Thailand: Reserve money, plus demand deposits, less deposit money banks' currency, plus Bank of Thailand and Exchange Fund bankers' deposits.

The data is contained on an *FS tape in a line file named MONEY.SUPPLY. Format (I3, 5A1, 7F10.4, I2) Country code, Currency description, 7 years' money supply in billions of domestic currency, First year of data for each record.

DISTANCES FROM VANCOUVER TO FOREIGN PORTS

Data on distances from Vancouver to the closest large port in Pacific Rim countries. Data collected from Map of the World Showing Trade Routes and the Shortest Sailing Distances Between Canada, The British Empire and Foreign Ports, Department of Mines and Resources, 1938, Canada.

Data is contained on an *FS tape in a line file named DISTANCES. Format= (I3, 3X, I6, 6X, 24A1); Country number, distance in miles, Country name (and port name if needed). Data was collected in 1975.

CANADIAN TRADE AGREEMENTS WITH PACIFIC RIM COUNTRIES

The types of trade agreements between Canada and Pacific Rim Countries divided into 3 categories was collected from Canada Yearbook 1973 published by Statistics Canada, International Trade Section.

The data is on an *FS tape in a line file named TRADE.AGREEMENTS. Format = (I3, 14X, I1, 6X, 24A1); country code, agreement type, country name. Agreements are categorized as follows:

- (1) Have trade agreement (most favored nation).
- (2) No trade agreement.
- (3) Commonwealth agreement (British Preferential).

JAPANESE CORPORATE RESEARCH AND DEVELOPMENT EXPENDITURES

Data on Japan's total corporate expenditures on research and development from 1965 to 1972. Data was collected from the Survey on Science and Technics Research published by the Bureau of Statistics of the Office of the Prime Minister. Data is in millions of yen. Data was provided in a photocopy of the publication by the International Society for Educational Information, with translation from the Japanese characters in the titles in 1975.

The data is contained on an *FS tape in a line file named JTOTR&D. Format= (A2, 2I3, I10, I3, 2X, 47A1); Country mnemonic (JA), Beginning S.I.C. Code (Canadian system), Ending code, Year, Total research & development expenditure (in millions of yen), Japan country code number (559), Description of S.I.C. Group.

ITEMIZED RESEARCH AND DEVELOPMENT EXPENDITURES IN JAPAN

Data in a breakdown form of research and development expenditures in Japanese industries. Data was collected from the Survey on Science and Technics Research published by the Bureau of Statistics of the Office of the Prime Minister of Japan. The International Society for Educational Information provided the Division with a photocopy for our files. Translation of the Japanese titles and collection of the data took place in 1975.

The data is contained on an *FS tape in a line file named JITEMR&D. Format (I3, 1X, I2, 40A1, 2I3, A1); Country code (559), Year, Personnel expense, Raw materials expense, Purchase of tangible assets, Other assets, group description, S.I.C. Code range (Canadian system) or group size, Code 'Y' for sizes.

Note that some of the data is by the size of the corporation.

JAPANESE TOTAL EXPORTS AND IMPORTS

Japan's total exports and imports to the Pacific Rim and other countries from 1960 to 1972. The data was collected from the Japan Statistical Yearbook, Value of Foreign Trade by Country. All amounts are in 100 millions of yen.

Data is contained on an *FS tape in a line file named J.EXPORT&IMPORT. Format=(I3, 3X, 4(2I6,I2), 5A1) Country number, 4 fields of Total Exports, Total Imports, Year, Mnemonic 'JAPAN'. Data was collected in 1975.

JAPANESE STEEL AND COKE DATA

Coking Coal Prices. Average Japanese prices of coking coal in U.S. dollars per metric tonne, c.i.f. Japan by sources of the coke. The data was provided by the Japan Iron and Steel Federation and M.I.T.I. The average prices of Japan's domestic coal are on the basis of the calendar year. Data includes fiscal years from 1959 to 1973, imports from U.S.A., Australia, Canada, U.S.S.R, Poland, an average import price, domestic price, and an overall average price.

The data is on an *FS tape in a line file named J.COAL.PRICE. Format= (I3, I2, 7X, 8F6.2); Country code, Fiscal year, U.S. coal price, Australian coal price, Canadian coal price, U.S.S.R. coal price, Polish coal price, Import average price, Domestic coal price, Overall average coal price. Data is in \$U.S. per metric tonne.

Coking Coal Volumes Purchased. Volumes of coking coal purchased by Japan from world sources, in thousands of metric tonnes. Data derived from Japan Iron and Steel Federation reports. Data for fiscal years from 1959 to 1973.

The data is on an *FS tape in a line file named J.COAL.VOLUME. Format=(I3, I2, 7X, 10F6.0); Country code, Fiscal year, U.S. volume, Australian volume, Canadian volume, Russian volume, Polish volume, Chinese volume, Other source volume, Total imported volume, Domestic volume, Total coal volume purchased, in thousands of metric tonnes.

Percent Coking Coal Purchased. Ratio in percent of coking coal purchased for Japanese steel industry by sources. The data was derived from reports of the Japan Iron and Steel Federation. Data is for fiscal years 1959 to 1973.

The data is on an *FS tape in a line file named J.COAL.RATIO. Format= (I3, I2, 7X, 10F6.1); Country code, Fiscal year, Percent imported from U.S.A., Australia, Canada, U.S.S.R, Poland, China, Other sources, Total percent imported, Percent domestic coal, Total.

Domestic Coal Output and Imported Coal Volumes. Japanese output of domestic coal and volumes of imported coal. Data derived from reports of M.I.T.I., Japanese Finance Ministry, and the Japan Iron and Steel Federation. Data is for fiscal years 1959 to 1973 and is in thousands of metric tonnes.

The data is contained on an *FS tape in a line file named J.COAL.IMPCRTS. Format = (I3, I2, 1X, 6I6); Country code, Fiscal year, Domestic coking coal output, Other domestic coal, Total domestic coal output, Imported coking coal, Other imported coal, Total imported coal, in thousands of metric tonnes.

Materials Input to Japanese Steel Industry. Materials input statistics in thousands of metric tonnes for the Japanese Steel Industry. Data derived from reports of the Japan Iron and Steel Federation, for fiscal years 1959 to 1973.

The data is contained on an *FS tape in a line file named J.STEEL.INPUT. Format = (I3, I2, 7x, 10I6); Country code, Fiscal year, Pig iron production, Crude steel production, Coking coal consumption, Imported coal, Domestic coal, Hard coal, Soft coal, Total coking coal consumption, Coal ratio (KG of coal consumed per tonne of pig iron produced), Coke ratio (Kg of coke consumed per tonne of pig iron produced), Heavy oil injection per tonne of pig iron.

FOREST PRODUCT DATA

Exports of Dimensioned Lumber. Data on Canadian dimensioned lumber exported to Pacific Rim countries and to the United States from 1968 to 1974. This data was directly extracted from the primary data base tapes with no additional processing done.

The data is contained on an *FS tape in a line file named EX.LUMBER. Format= (I3, 2X, I3, I2, 3I1, I2, I11, I12, 1X, 5A1, 14A1) = Export commodity class (331), Country code, Western U.S. census sub-division (where applicable), Region of clearance, Region of lading, Mode of transport, Year, Export quantity, Export value, Unit of quantity (M B F), Export commodity description (LUMBER), Country description.

World Forest Resources Estimates of world forest resources by market region (in thousands of acres). Accessible forest acres estimated from Cxford Economic Atlas of the World, and A World Geography of Forest Resources, American Geographical Society. This data was derived from Table 7 of British Columbia Fabricated Forest Product Exports, 1970, World Markets excluding the United States published by the Department of Industrial Development Trade and Commerce, Province of British Columbia.

The data is on an *FS tape in a line file named WORLD.FOREST. Format = (2I3, 3X, F9.1, 3F6.2, 1X, 7A4) Region country number range, Accessible forestation in thousands of acres, Percent coniferous, Percent temperate hardwood, Percent tropical hardwood, Market region name. Market regions included are United Kingdom, Common Market (Luxembourg, Belgium, France West Germany, Netherlands, Italy), Other Europe including the U.S.S.R., Middle East, Other Africa, Japan, Other Asia excluding Japan, Australia, Other Oceania, South America, and Central America and Caribbean.

Forest Product Imports in World Markets. Comparative levels of forest product imports into world markets in 1968. Data derived from Table 4 of British Columbia Fabricated Forest Product Exports, 1970, World Markets Excluding the United States, published by the Department of Industrial Development, Trade and Commerce. World data was derived from the F.A.O. Forestry Yearbook, 1969, while British Columbia data was compiled by the Bureau of Economics and Statistics, D.I.D.T.C. Values are in thousands of Canadian dollars.

The data is contained on an *FS tape in a line file named FOREST.IMPORTS. Format = (2I3, 6F8.0, 6A4, A3) Region country

number range, Sawwood from world sources, Sawwood from E.C., Pulp from world sources, Pulp from E.C., Paper for printing from world sources, Paper from B.C., Market region name.

Regions included are United Kingdom, European Common Market (Luxembourg, Belgium, France, West Germany, Netherlands, Italy), Other Europe including the U.S.S.R., Middle East, Other Africa, Japan, Other Asia excluding Japan, Australia, Other Oceania, South America, Central America & the Carribean.

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TECHNOLOGICAL INNOVATION STUDIES PROGRAM
PROGRAMME DES ETUDES SUR LES INNOVATIONS TECHNIQUES
REPORTS/RAPPORTS

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