

11.E

Taiwan

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11.E.1 Initial Input-Output Table

The source of the initial input-output (I-O) table for Taiwan is “Input-Output Table of Taiwan-1999” from the Directorate-General of Budget, Accounting and Statistics (DGBAS), Executive Yuan, Republic of China, Statistics Bureau Press. It is the third such I-O table following the 1994 and 1996 tables.

The original 1999 table includes 596 by 160 sectors. The units are 1 million Yuan (NT) at current producers’ prices. Two different kinds of tables are available: a transactions table of domestic goods and services and a transactions table of imported goods and services.

The matrix of final demand in the transactions table of domestic products and that of the transactions table of imports include private consumption expenditure, government consumption expenditure, gross private fixed capital formation, change in stocks, and exports.

The matrix of value-added in the transactions table at producers’ prices includes compensation of employees, operating surplus, depreciation of fixed capital, indirect taxes and (less) subsidies. Depreciation of fixed capital was added to operating surplus to obtain a vector of employment of capital.

11.E.2 Sectoral Split

The list of commodities in the 1999 Taiwan I-O table and the concordance to the GSC2 classification is given in appendix table 11.E.A1.

There are nine sectors in the original 1999 Taiwan I-O table that had to be made consistent with the agriculture and manufacturing sector classifications in GSC2. These are: Other common crops (sector 002), Other special crops (sector 004), Other livestock (sector 009), Crude oil, natural gas and geothermal energy (sector 014), Slaughtering and by-products (sector 018), Canned foods (sector 024), Misc. food products (sector 030) sectors.

11.E.3 Other Adjustments

The initial Taiwan I-O table includes some negative values. Although these are mainly due to the original statistics, they are not allowed for CGE analysis. We adjusted the values for the sectors where the reported value of capital payments is negative. These sectors are Coal (sector 013), Edible Oil & Fat By-Products (sector 019), and Sugar (sector 024). We assumed a normal profit rate for these sectors of 0.04, 0.11, and 0.14, respectively.

References

- Directorate-General of Budget, Accounting and Statistics (DGBAS), 2001. "1999 Input-Output Tables," Executive Yuan, R.O.C.
- Huff, K, R. McDougall, and T. Walmsley, 1999. "Contributing Input-Output Tables to the GTAP Data Base," Technical Paper No. 1, Center for Global Trade Analysis.

Appendix

Table 11.E.A1 Commodity Concordance between GTAP GSC2 and 1999 Taiwan I-O table

GSC2 Sectors	Classification in the 1999 Taiwan I-O Table (3-digits)	Classification in the 1999 Taiwan I-O Table (5-digits)
01 Paddy rice	001 Paddy rice	
02 Wheat		210 Wheat
03 Cereal grains nec		230 Corn
		295 By-products
04 Vegetables, fruit, nuts	005 Fruit	220 Sweet-potatoes
	006 Vegetable	431 Peanuts
	007 Other Horticultural Crops	439 Misc. crops for beverage purpose
05 Oil seeds		
06 Sugar cane, sugar beet	003 Sugarcane	
07 Plant-based fibers		441 Raw cotton
		449 Misc. fiber
08 Crops nec		410 Tea leaves
		420 Tobacco
		490 Other crops for processing
		495 By-products
09 Bovine cattle, sheep and goats horses		910 Cattle
10 Animal products nec	008 Hogs	
		940 Eggs
		951 Chickens
		959 Other poultry
		960 Honey
		990 Other livestock, hunting prod. & by-products
		1840 Animal hide & skins
11 Raw milk		930 Milk
12 Wool, silk-worm cocoons		920 Wool & hair, unkempt milk
13 Forestry	011 Forestry	
14 Fishing	012 Fisheries	
15 Coal	013 Coal	
16 Oil		1410 Crude oil
		1440 Exploration expense
17 Gas		1420 Natural gas
		1430 Geothermal energy
18 Minerals nec	015 Metallic Minerals	
	016 Salt	
	017 Other Non-Metallic Minerals	
19 Bovine cattle, sheep, goat, horse meat products		1820 Beef
		1830 Other meat
		1895 By-products
20 Meat products nec		1810 Pork
		2430 Canned meat & fish
		3010 Processed fish & meat (exclude canned & frozen)

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Table 11.E.A1 Commodity Concordance between GTAP GSC2 and 1999 Taiwan I-O table (Contd)

GSC2 Sectors	Classification in the 1999 Taiwan I-O Table (3-digits)	Classification in the 1999 Taiwan I-O Table (5-digits)
21 Vegetable oils and fats	019 Edible Oil & Fat By-Products	
22 Dairy products	028 Dairy products	
23 Processed rice	021 Rice	
24 Sugar	022 Sugar	
25 Food products nec	020 Flour	
	023 Animal feeds	
	024 Canned foods (excluding 02430)	
	025 Frozen foods	
	027 Seasonings	
	029 Sugar confectionery & bakery products	
	030 Misc. Food products (excluding 03010)	
26 Beverages and tobacco products	031 Non-Alcoholic Beverages	
	032 Alcoholic Beverages	
	033 Tobacco	
27 Textiles	034 Cotton & Cotton Fabrics	
	035 Wool & Worsted Fabrics	
	036 Artificial Fabrics	
	037 Knitted Fabrics	
	038 Other Fabrics & Fabric Products	
28 Wearing apparel	039 Printing, Dyeing & Finishing	
	040 Tatted Garments	
	041 Knitted Garments	
	042 Fabric Products, Wearing Apparel & Accessories	
29 Leather products	043 Leather	
	044 Leather Footwear	
	045 Other Leather Products	
30 Wood products	046 Lumber	
	047 Plywood	
	048 Wood, Bamboo & Rattan Products	
31 Paper products, publishing	050 Pulp & Paper	
	051 Paper Products	
	052 Newspapers, Books & Magazines	
	053 Other Printed Matter & Bookbinding	
32 Petroleum, coal products	066 Petroleum Refining Products	
	067 Coal Products	
33 Chemical, rubber, plastic products	054 Other Industrial Chemicals	
	055 Petrochemical Raw Materials	
	056 Chemical Fertilizers	
	057 Synthetic Fibers	
	058 Other Artificial Fibers	
	059 Plastic (Synthetic Resins)	
	060 Other Chemical Materials	
	061 Coatings	
	062 Medicines	
	063 Pesticides and Herbicides	

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Table 11.E.A1 Commodity Concordance between GTAP GSC2 and 1999 Taiwan I-O table (Contd)

GSC2 Sectors	Classification in the 1999 Taiwan I-O Table (3-digits)	Classification in the 1999 Taiwan I-O Table (5-digits)
33 Chemical, rubber, plastic products (contd)	064	Synthetic Detergents and Washing Preparations and Cosmetics
	065	Misc. Chemical Manufactures
	068	Rubber & Rubber Products
	069	Plastic Footwear
	070	Other Plastic Products
34 Mineral products nec	071	Ceramics
	072	Glass & Glass Products
	073	Cement
	074	Cement Products
	075	Misc. Non-Metallic
35 Ferrous metals	076	Pig Iron & Crude Steel
	077	Primary Iron & Steel Products
36 Metals nec	078	Aluminum
	079	Miscellaneous Metals
37 Metal products	080	Metallic Products for Household Use
	081	Metallic Hand Tools
	082	Iron and Steel Products
	083	Aluminum Products
	084	Misc. Metallic Products
	085	Surface Treating of Metal Products
38 Motor vehicles & parts	107	Motor Vehicle
39 Transport equipment nec	106	Shipbuilding
	108	Motorcycles
	109	Bicycles
	110	Other Transport Equipment
40 Electronic equipment	096	Computer Products
	097	Computer Peripheral Equipment
	098	Data Storage Media
	099	Computer Components
	100	Video and Radio Electronic Products
	101	Communication Apparatus
	102	Electronic Tube
	103	Semi-conductors
	104	Opto-electronic Components & Materials
	105	Electronic Components & Parts
41 Machinery and equipment nec	086	General Industrial Machinery
	087	Metal Processing Machinery
	088	Industrial Machinery
	089	Other Machinery
	090	Machinery Parts, Repair & Maintenance
	091	Household Electrical Appliances
	092	Lighting Equipment
	093	Power Generation, Transmission and Distribution Machinery

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Table 11.E.A1 Commodity Concordance between GTAP GSC2 and 1999 Taiwan I-O table (Contd)

GSC2 Sectors	Classification in the 1999 Taiwan I-O Table (3-digits)	Classification in the 1999 Taiwan I-O Table (5-digits)	
41 Machinery and equipment nec (contd)	094 Wires & Cables		
	095 Other Electrical Materials		
	111 Precision Instruments & Apparatus		
42 Manufactures nec	049 Non-Metallic Furniture		
	112 Education & Entertainment Articles		
	113 Other Manufactures		
43 Electricity	114 Electricity		
44 Gas manufacture, distribution	115 Gas		
45 Water	116 City Water, Steam & Hot Water		
46 Construction	117 Residential Building Construction		
	118 Nonresidential Building Construction		
	119 Public Works		
	120 Other Construction		
	47 Trade	121 Wholesale Trade	
		122 Retail Trade	
		123 Foreign Trade	
124 Food & Beverage Services			
138 Hotel Services			
156 Vehicles Services			
157 Other Repair Service			
48 Transport nec	125 Railway Transportation		
	126 Other Land Transportation		
	129 Services Incidental to Transport		
	130 Travel Agency Services		
	131 Warehousing		
	127 Water Transportation		
49 Water transport	128 Air Transportation		
50 Air transport	132 Postal Services		
51 Communication	133 Telegram & Telephone		
	134 Finance		
52 Financial services nec	135 Security & Future		
	136 Insurance		
53 Insurance	139 Real Estate Services		
54 Business services nec	140 Legal and Accounting Services		
	141 Consulting Services		
	142 Data processing & information services		
	143 Advertising Services		
	144 Renting & Lousing Services		
	145 Misc. Services For Business		
	149 Scientific Research & Services		
	55 Recreational and other services	154 Radio, Television & Movies Services	
155 Recreational & Cultural Services			

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Table 11.E.A1 Commodity Concordance between GTAP GSC2 and 1999 Taiwan I-O table (Contd)

GSC2 Sectors		Classification in the 1999 Taiwan I-O Table (3-digits)	Classification in the 1999 Taiwan I-O Table (5-digits)
55	Recreational and other services (contd)	158	Household Services
		159	Other Personal Services
		160	Undistributed
		010	Agricultural services
56	Public administration and defense, education, health	146	Public Administration Services
		147	Environmental Sanitary Services
		148	Educational Training Services
		150	Medical & Health Services
		151	Social Welfare Services
		152	Services of Civil Association
57	Dwellings (n.a.)	153	Other Social Services
		137	House Services