

Taiwan

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1. Initial Input-Output Table

This source of the initial input-output (I-O) table for Taiwan is “Input-Output Table of Taiwan-2006” from the Directorate-General of Budget, Accounting and Statistics (DGBAS), Executive Yuan, Republic of China, Statistics Bureau Press. The original 2006 table includes 554 by 166 sectors. The units are 1 million Yuan (NT) at current producer’ prices. Two different kinds of table 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, exports.

The matrix of value added in the transactions table at producer’ 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.

2. Sectoral Classification

The list of commodities in the 2006 Taiwan I-O table and the concordance to the SMAP classification is given in the Appendix table 1.

3. Sectoral Split

There ten sectors in the original 2006 Taiwan I-O table that had to be consistent with the agriculture and manufacturing sector classifications in SMAP. There are the Other common crops (sector 002), Other special crops (sector 003), Other livestock (sector 008), agricultural services (sector 009), Crude petroleum and natural gas extraction (sector 012), Other non-metallic minerals (sector 015), Slaughtering and by-products (sector 016), Canned foods (sector 022), Frozen foods (sector 023), Other foods (sector 027).

4. Other adjustments

The initial Taiwan I-O tables also contain some negative values. Although they are mainly due to the original statistics, they are not allowed for CGE analysis. We fixed some items.

There two sectors in the original 2006 Taiwan I-O table that employment of capital contain negative values. There are the Sugar (sector 024) and Wearing apparel (sector 028) in GTAP SMAP sector. We estimated the three employment of capital rate are 0.04 and 0.03.

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 1 Commodity Concordance between GTAP-SMAP and 2006 Taiwan I-O table

GTAP-SMAP Sectors	Classification in the 2006 Taiwan I-O table (3-digit)	Classification in the 2006 Taiwan I-O table (5-digit)
01 Paddy rice	001 Paddy rice 009 Agricultural Services	
02 Wheat		00210 Wheat
03 Cereal grains nec		00220 Sweet-potatoes 00230 Corn 00240 Soybeans 00290 Other cereals 00295 By-products
04 Vegetables, fruit, nuts	004 Fruits 005 Vegetables 006 Other Horticultural Crops	
05 Oil seeds		00250 Groundnuts 00390 Other special crops
06 Sugar cane, sugar beet		00340 Sugarcane for sugar manufacturing
07 Plant-based fibers		00330 Raw cotton
08 Crops nec		00310 Tea leaves 00320 Tobacco 00395 By-products
09 Bovine cattle, sheep goats hohorses		00810 Cattle
10 Animal products nec	007 Hogs	00840 Eggs 00851 Chickens 00859 Other misc. poultry 00860 Honey 00895 Other misc. livestock, hunting prod. & by-products
11 Raw milk		00830 Raw milk
12 Wool, silk-worm cocoons		00820 Raw wool & hair
13 Forestry	010 Forest Products	
14 Fishing	011 Fishery Products	
15 Coal		01520 Coal
16 Oil		01210 Crude petroleum 01230 Exploration expenses
17 Gas		01220 Natural gas

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Table 1 Commodity Concordance between GTAP-SMAP and 2006 Taiwan I-O table (continued)

GTAP-SMAP Sectors	Classification in the 2006 Taiwan I-O table (3-digit)	Classification in the 2006 Taiwan I-O table (5-digit)
18 Minerals nec	013 Metallic Minerals 014 Sand & Gravel for Construction	01510 Minerals for industry & stone for building purpose 01530 Unrefined salt 01590 Other non-metallic mineral products
19 Bovine cattle, sheep, goat,...		01620 Beef
20 Meat products nec		02220 Canned meat & fishery products 02310 Frozen meat 02710 Processed meat & aquatic products (excl. canned & frozen) 01610 Pork 01630 Other meat 01640 Animal hide & skins 01695 By-products
21 Vegetable oils and fats	017 Edible Oil & Fat By-Products	
22 Dairy products	025 Dairy Products	
23 Processed rice	019 Rice	
24 Sugar	020 Sugar	
25 Food products nec	018 Flour 021 Animal Feeds 024 Seasonings 026 Sugar Confectionery & Bakery Products	02210 Canned vegetables & fruit 02290 Other canned foods(excl. canned milk) 02295 By-products 02320 Frozen fishery products 02330 Frozen Fruit and vegetables 02340 Frozen prepared meals & dishes 02390 Other frozen foods 02720 Bakery nuts & dehydrated & preserved foods 02730 Soybean products 02740 Noodles 02750 Refined tea 02790 Other misc. foods
26 Beverages and tobacco products product	028 Alcoholic Beverages 029 Non-Alcoholic Beverages 030 Tobacco	
27 Textiles	031 Cotton & Cotton Fabrics 032 Wool & Worsted Fabrics 033 Artificial Fabrics & Glass Fiber Products 034 Knitted Fabrics 035 Other Fabrics & Fabric Products 036 Printing, Dyeing and Finishing	
28 Wearing apparel	037 Woven Wearing Apparel 038 Knitted Wearing Apparel 039 Clothing Accessories	

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Table 1 Commodity Concordance between GTAP-SMAP and 2006 Taiwan I-O table(continued)

GTAP-SMAP Sectors	Classification in the 2006 Taiwan I-O table (3-digit)	Classification in the 2006 Taiwan I-O table (5-digit)
29 Leather products	040 Leather 041 Footwear 042 Other Leather Products	
30 Wood products	043 Lumber 044 Plywood and Reconstituted Wood 045 Wood, Bamboo & Rattan Products 103 Non-Metallic Furniture	
31 Paper products, publishing	046 Pulp & Paper 047 Paper Products 048 Printing and Reproduction of Recorded Media	
32 Petroleum, coal products	049 Petroleum Refining Products 050 Coke & Other Coal Products	
33 Chemical, rubber, plastic products	051 Basic Chemical Materials 052 Petrochemical Raw Materials 053 Chemical Fertilizers 054 Plastics (Synthetic Resins) 055 Synthetic Rubber 056 Synthetic Fibers 057 Other Artificial Fibers 058 Pesticides and Herbicides 059 Coatings, Dyes and pigments 060 Cleaning Preparations and Cosmetics 061 Other Chemical Products 062 Medicines 063 Rubber Products 064 Plastic Products	
34 Mineral products nec	065 Glass and Glass Products 066 Ceramic Products 067 Cement 068 Cement Products 069 Other Non-Metallic Mineral Products	
35 Ferrous metals	070 Pig Iron & Crude Steel 071 Primary Iron & Steel Products	
36 Metals nec	072 Aluminum 073 Other Metals	
37 Metal products	074 Metal Hand Tools and Dies 075 Metal Structures & Architectural Components 076 Metal Containers 077 Metalworking 078 Other Fabricated Metal Products 104 Metallic Furniture	
38 Motor vehicles and parts	098 Motor Vehicles	

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Table 1 Commodity Concordance between GTAP-SMAP and 2006 Taiwan I-O table(continued)

GTAP-SMAP Sectors	Classification in the 2006 Taiwan I-O table (3-digit)	Classification in the 2006 Taiwan I-O table (5-digit)
39 Transport equipment nec	099 Ships 100 Motorcycles 101 Bicycles 102 Other Transport Equipment	
40 Electronic equipment	079 Semi-conductors 080 Optoelectronic Materials and Components 081 Printed Circuit Assembly 082 Other Electronic Components and Parts	
41 Machinery and equipment nec	083 Computer Products 084 Computer Peripheral Equipment 085 Communication Equipment 086 Audio and Video Electronic Products 087 Unrecorded Data Storage Media 088 Precision Instruments & Apparatus 089 Power Generation, Transmission and Distribution Machinery 090 Wires , Cables and Wiring Devices 091 Lighting Equipment 092 Domestic Appliances 093 Other Electrical Materials 094 Metal Processing Machinery 095 Other Special-Purpose Machinery 096 Boilers and Pressure Containers 097 General-Purpose Machinery 107 Repair and Installation of Industrial Machinery and Equipment	
42 Manufactures nec	105 Education & Entertainment Articles 106 Other Manufactures	
43 Electricity	108 Electricity and Steam	
44 Gas manufacture, distribution	109 Gas	
45 Water	110 City Water	
46 Construction	115 Residential Building Construction 116 Nonresidential Building Construction 117 Public Works 118 Other Construction	

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Table 1 Commodity Concordance between GTAP-SMAP and 2006 Taiwan I-O table(continued)

GTAP-SMAP Sectors	Classification in the 2006 Taiwan I-O table (3-digit)	Classification in the 2006 Taiwan I-O table (5-digit)
47 Trade	119 Merchandise Brokerage 120 Wholesale Trade 121 Retail Trade 129 Accommodation Services 130 Food and Beverage Services 162 Repair and Maintenance of Motor Vehicles 163 Other Repair Services	
48 Transport nec	122 Railroad Vehicle Transportation 123 Other Land Transportation 126 Supporting Services to Transportation 127 Warehousing and Storage	
49 Water transport	124 Water Transportation	
50 Air transport	125 Air Transportation	
51 Communication	128 Postal & Courier Services 134 Telecommunication Services	
52 Financial services nec	137 Financial Intermediation 138 Insurance 140 Real Estate Development Services 141 Real Estate Operation and Relative Services	
53 Insurance	139 Securities, Futures and Other Activities Auxiliary to Financial Service Activities	
54 Business services nec	135 Computer Systems Design Services 136 Data Processing and Information Supply Services 143 Legal and Accounting Services 144 Research & Development Services 145 Advertising and Market Research 146 Architecture and Engineering Services; Technical Testing and Analysis Services 147 Designing Services 148 Other Professional and Technologic Services 149 Renting & Leasing Services 150 Employment Services 151 Travel Agency Services 152 Security and Investigation Services 153 Buildings and Greenery Services 154 Other Support Services	

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Table 1 Commodity Concordance between GTAP-SMAP and 2006 Taiwan I-O table(continued)

GTAP-SMAP Sectors	Classification in the 2006 Taiwan I-O table (3-digit)	Classification in the 2006 Taiwan I-O table (5-digit)
55 Recreational and other services	131 Publishing 132 Motion Picture, Video and Music Publishing Services 133 Broadcasting and Programming Services 156 Educational Training Services 157 Medical and Health Services 158 Residential Care & Other Social Work Services 159 Arts, Entertainment and Recreation Services 160 Services of Civil Association 161 Other Social Services 164 Domestic Services 165 Other Personal Services	
56 Public administration and defence, ..	111 Wastewater (Sewage) Treatment 112 Waste Collection, Treatment & Disposal 113 Materials Recovery 114 Remediation Services 155 Public Administration Services	
57 Dwelling	166 Undistributed 142 House Services	