

Mexico

Input Output Table

Aida Gonzalez - Mellado

1. Introduction

This document describes the procedure followed to update the Mexican input-output (I/O) table for version 6.2 of the Global Trade Analysis Project (GTAP) data base. The chapter is organized as follows. Section 2 presents the general characteristics of the Mexican I/O table, and the sources used to obtain all the required data by the Global Trade Analysis Project (GTAP). Section 3 contains the mapping between GTAP and the national Mexican classification. In the last section some specific problems in the mapping between the constructed Mexican I/O table and the GTAP data base are presented.

2. Data source

The original data used to compile the Mexican I/O table for the GTAP data base version 6.2 was obtained from the National Institute of Statistical Geography and Informatics (INEGI) and from the Mexican Ministry of Finance and Public Credit (SHCP). The data provided by INEGI presents a high segregation rate, which made it difficult to find a single document containing all the required information with the suitable criteria for GTAP data base. The selected information was collected in 2002 and published in different documents in 2003.

The INEGI publishes regularly documents for each main division of the Mexican Classification of Products and Services, the main divisions and therefore documents consulted to collect sectorial information for the year 2002 are:

Main Division 1: Agriculture, Livestock, Forestry and Fishery

Main Division 2: Mining

Main Division 3: Manufacturing Industry

Main Division 4: Construction

Main Division 5: Electricity, Gas and Water

Main Division 6: Trade, Hotels and Restaurants

Main Division 7: Transports, Storage and Communications

Main Division 8: Financial Services, Insurances, and State Agencies.

Main Division 9: Community Services, Recreational and Cultural Activities.

The activities and services are among the main divisions further disaggregated in up to 1778 different activities in total.

Main features of the found data:

- Value of Production at constant prices in pesos of 1993
- Value of Labour at constant prices in pesos of 1993
- Value of Capital at constant prices in pesos of 1993
- Value of the difference in stocks at constant prices in pesos of 1993
- Value of National Investments at constant prices in pesos of 1993
- Value of Imports at constant prices in dollars of 1993
- Value of Exports at constant prices in dollars of 1993
- Value of Domestic Consumption by households at constant prices in pesos of 1993
- Value of Import Consumption by households at constant prices in pesos of 1993
- Value of Domestic Consumption by government at constant prices in pesos of 1993
- Value of Import Consumption by government at constant prices in pesos of 1993

In the case of imports prices are given as CIF prices at purchaser price

In the case of exports prices are given as FOB prices at purchaser price.

All the values reported in the IO Table for Mexico are expressed in thousand US dollar.

The different types of taxes applied for sector have been calculated following the National Tax Law for 2002, published by the Mexican Ministry of Finance and Public Credit.

3. Mapping between the Mexican Classification and the GTAP concordance

Table 1A in the appendix shows how the GTAP concordance matches the Mexican Classification of Products and Activities classification used by the National Institute of Statistical Geography and Informatics. Since the INEGI classification is considerably more disaggregated than the GTAP classification, it easily fulfils most of the requirements.

4. Discordances by updating the I-O Table

Values reported in two different sources were not always the same. In such cases, the value considered was the one fitting better for that sector. In other cases the value taken for the IO Table was the average of reported values from different sources.

Another deviation was found in main divisions where the reported values were not totally disaggregated e.g. in the case of Main Division 5 -import consumption by government- the reported value for the entire division embodies 3 different GTAP-sectors. In such cases, the values were calculated considering the partial share in each sector.

Some vectors have not been found i.e., for all the sectors: import investment, change in stock for imports, for few sectors: domestic investment, change in stocks, in those cases the reported value was fixed to zero.

5. References

Homepage of the National Institute of Statistical Geography and Informatics (INEGI):

www.inegi.gob.mx Consulted from 5th September to 3 November 2005

Documents consulted:

Anuario Estadístico del Comercio Exterior los Estados Unidos Mexicanos 2003. Exportación en miles de dólares

Anuario Estadístico del Comercio Exterior los Estados Unidos Mexicanos 2003. Importación en miles de dólares

Encuesta Industrial Anual 2001-2002

El sector Energético en México. 2003

Oferta y Demanda Final de Bienes y Servicios 2005

El sector Alimentario en Mexico 2002

El sector Petrolero en Mexico 2002

Sistema de Cuentas Nacionales de Mexico. Indicadores Macroeconomicos de México 2003

Homepage of the Mexican Ministry of Finance And Public Credit (SHCP):

www.sat.gob.mx consulted from 25th October to 3 November 2005.

Documents consulted:

Compilacion de Legislacion Fiscal 2002

Appendix A

Table 1A.Mapping between GTAP concordance and the Mexican Classification of Products and Activities

GSC 2		Mexican Classification of Products and Activities	
Number	Code	Code	Description
1	pdr	111160	Rice
2	wht	111140	Wheat
3	gro	111131 111132 111139 111151 111152 111191 111192 111193 111194 111195	Beans grano garbanzo grano other leguminous Maize grain Sorghum grain Oats grain Barley grain Sorghum feed Oats feed other cereals
4	v_f	111216 111339 111410 111910 111941 111942 111992 111993 111999 0112	Potatoes other fruits and nuts Herbs (<i>mainly for pharmacy</i>) Tobacco Alfalfa Grass Peanut Agave Other crops(<i>beets,maple and látex</i>) other legumes
5	osd	111110 111121 111122 111129	Soja Safflower Sunflower other oilsseeds
6	c_b	111930	Sugar beet
7	pfb	111999	Other crops
8	ocr	0113	Fruits, nuts and other plants
9	ctl	0121	Cattle,
10	oap	0122 0150	Sheep, goats, and other animals; Hunting
11	rmk	311511	raw milk
12	wol	111920	Wool

GSC 2		Mexican Classification of Products and Activities	
Number	Code	Code	Description
13	for	0200	Forestry
14	fsh	0500	Fishery
15	col	1010 1030	Coal extraction Mining and agglomeration of peat
16	oil	11101	Crude petroleum extraction
17	gas	11102	Gas extraction
18	omn	1020 1200 1320 1410 1421 1422 1429	Mining of lignite Mining of uranium and thorium Mining de minerales metalíferos no ferrosos, excepto los minerales de uranio y torio Mining of rock, sand and clay Mining of minerals for fertilizers and other chemical products Mining of salt Other mining and quarrying.
19	cmt	15111	Production, processing and meat conservation of cattle meat and its products.
20	omt	15112	Production, processing and meat conservation of poultry and other livestock
21	vol	1514	Production of vegetable and animal oils
22	mil	1520	Production of dairy products
23	pcr	1534	Paddy rice processing
24	sgr	1542	Sugar
25	ofd	1512 1513 1531 1532 1533 1541 1543 1544 1549 1554	Production, processing and conservation of fish Production, processing and conservation of legumes Production of flour Production of starch and its products Production of animal feeding Production of baker's wares Production of cocoa, chocolate and sugar confectionery Production of macaroni, noodles, couscous and similar farinaceous products Production de other food products Production non alcoholic beverages
26	b_t	1551 1552 1553 1600	Distillation and mix of spirits. Production of wines Production of drinks. Production of cigarettes and tobaccos

GSC 2		Mexican Classification of Products and Activities	
Number	Code	Number	Code
27	tex	1711	Production of textile fiber and staple fibre
		1712	Textile products
		1721	Manufacture of textile materials. Except wearing apparel
		1722	Manufacture carpets and carpets
		1723	Manufacture of cords, cords, twines and nets
		1729	Manufacture of other textile products . Manufacture
		1730	of weaves and other textile articles
28	wap	1810	Production of wearing apparel
29	lea	1820	Production of leather
		1911	Tannery services
		1912	Production of leather products
		1920	Production of shoes
30	lum	2010	Sawmilling and planing of wood; impregnation of wood
		2021	Manufacture of veneer sheets; manufacture of plywood, laminboard, particle board, fibre board and other panels and boards
		2022	Manufacture of builders carpentry and joinery
		2023	Manufacture of wooden containers
		2029	Manufacture of other products of wood
		2101	Manufacture of articles of cork, straw and plaiting materials
31	ppp	2102	Manufacture of corrugated paper and paperboard and of containers of paper and paperboard
		2109	Manufacture of other articles of paper and paperboard n.e.c.
		2211	Publishing of books
		2219	Other publishing
		2221	Printing of newspapers
		2222	Printing n.e.c.
		2230	Reproduction of recorded media
32	p_c	2310	Manufacture of coke oven products
		2320	Manufacture of refined petroleum products
		2330	Processing of nuclear fuel
33	crp	2411	Manufacture of industrial gases
		2412	Manufacture of fertilizers and nitrogen compounds
		2413	Manufacture of other inorganic basic chemicals
		2421	Manufacture of pharmaceuticals, medicinal chemicals and botanical products
		2422	Manufacture of paints, varnishes and similar coatings, printing ink and mastics
		2423	Manufacture of perfumes and toilet preparations
		2424	Manufacture of other chemical products
		2429	Manufacture of man-made fibres
		2430	Manufacture of rubber products
		2511	Manufacture of rubber tyres and tubes
		2519	Manufacture of other rubber products
		2520	Manufacture of plastic products

GSC 2		Mexican Classification of Products and Activities	
Number	Code	Number	Code
34	nmm	2610 2691 2692 2693 2694 2695 2696 2699	Manufacture of glass and glass products Manufacture of ceramic household and ornamental articles Manufacture of refractory ceramic products Manufacture of ceramic tiles and flags Manufacture of cement, lime and plaster Fabricación de productos de arcilla y cerámica Manufacture of concrete products for construction purposes Manufacture of other non-metallic mineral products
35	i_s	1310 2710 2731	Mining of iron ores Manufacture of basic iron and steel and of ferro-alloys Casting of metals
36	nfm	2720 2732	Manufacture of basic precious and non-ferrous metals Casting of light metals
37	fmp	2811 2812 2813 2891 2892 2893 2899	Manufacture of structural metal products Manufacture of tanks, reservoirs and containers of metal Manufacture of steam generators, except central heating hot water boilers Forging, pressing, stamping and roll forming of metal; powder metallurgy Treatment and coating of metals Manufacture of cutlery Manufacture of other fabricated metal products
38	mvh	3410 3420 3430	Manufacture of motor vehicles Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers Manufacture of parts and accessories for motor vehicles and their engines
39	otn	3511 3512 3520 3530 3591 3592 3599	Building and repairing of ships Building and repairing of pleasure and sporting boats Manufacture of railway and tramway locomotives and rolling stock Manufacture of aircraft and spacecraft Manufacture of motorcycles Manufacture of bicycles Manufacture of other transport equipment n.e.c.

GSC 2		Mexican Classification of Products and Activities	
Number	Code	Number	Code
40	ele	3000	Manufacture of office machinery
		3210	Fabricación de tubos y válvulas electrónicos y de other componentes electrónicos
		3220	Manufacture of electronic valves and tubes and other electronic components
		3230	Manufacture of television and radio receivers, sound or video recording or reproducing apparatus and associated goods
41	ome	2911	Manufacture of engines and turbines, except aircraft, vehicle and cycle engines
		2912	Manufacture of pumps and compressors
		2913	Manufacture of taps and valves
		2914	Manufacture of bearings, gears, gearing and driving elements
		2915	Manufacture of furnaces and furnace burners
		2919	Manufacture of other general purpose machinery n.e.c.
		2921	Manufacture of agricultural and forestry machinery
		2922	Manufacture of portable hand held power tools
		2923	Manufacture of machinery for metallurgy
		2924	Manufacture of machinery for mining, quarrying and construction
		2925	Manufacture of machinery for food, beverage and tobacco processing
		2926	Manufacture of machinery for textile, apparel and leather production
		2927	Manufacture of machinery for paper and paperboard production
		2929	Manufacture of other special purpose machinery n.e.c.
		2930	Manufacture of other special purpose machinery n.e.c.
		3110	Manufacture of weapons and ammunition
		3120	Manufacture of domestic appliances n.e.c.
		3130	Manufacture of electric domestic appliances
		3140	Manufacture of non-electric domestic appliances F
		3150	Manufacture of medical and surgical equipment and orthopaedic appliances
		3190	Manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process control equipment
		3311	Manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process control equipment
		3312	Manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process control equipment
		3320	Manufacture of industrial process control equipment
		3330	Manufacture of watches and clocks
42	omf	3610	Manufacture of furniture
		3691	Miscellaneous manufacturing n.e.c.
		3692	Manufacture of imitation jewellery
		3693	Manufacture of sports goods
		3694	Manufacture of games and toys
		3699	Other manufacturing n.e.c
		3710	Recycling of metal waste and scrap
		3720	Recycling of non-metal waste and scrap
43	ely	4010	Production and distribution of electricity

GSC 2		Mexican Classification of Products and Activities	
Number	Code	Number	Code
44	gdt	4020	Manufacture of gas; distribution of gaseous fuels through mains
		4030	Steam and hot water supply
45	wtr	4100	Collection, purification and distribution of water
46	cns	4510	Site preparation
		4520	Building of complete constructions or parts thereof; civil engineering
		4530	Building installation
		4540	Building completion
		4550	Renting of construction or demolition equipment with operator
47	trd	5010	Sale of motor vehicles
		5020	Maintenance and repair of motor vehicles
		5030	Sale of motor vehicle parts and accessories
		5040	Sale, maintenance and repair of motorcycles and related parts and accessories
		5050	Retail sale of automotive fuel
		5110	Wholesale on a fee or contract basis
		5121	Wholesale of grain, seeds and animal feeds
		5122	Wholesale of agricultural raw materials and live animals
		5131	Wholesale of household goods
		5139	Wholesale of electrical household appliances and radio and television goods
		5141	Wholesale of solid, liquid and gaseous fuels and related products
		5142	Wholesale of metals and metal ores
		5143	Wholesale of wood, construction materials and sanitary equipment
		5149	Wholesale of chemical products
		5150	Wholesale of machinery, equipment and supplies
		5190	Other wholesale
		5211	Retail sale in non-specialized stores
		5219	Other retail sale in non-specialized stores
		5220	Retail sale of food, beverages and tobacco in specialized stores
		5231	Retail sale of pharmaceutical and medical goods, cosmetic and toilet articles
		5232	Retail sale of textiles
		5233	Retail sale of furniture, lighting equipment and household articles n.e.c
		5234	Retail sale of hardware, paints and glass
		5239	Retail sale of books, newspapers and stationery
		5240	Retail sale of second-hand goods in stores
		5251	Retail sale via mail order houses
		5252	Retail sale via stalls and markets
		5259	Other non-store retail sale
		5260	Repair of personal and household goods
		5510	Hotels, camping sites and other provision of short-stay accommodation
		5520	Bars

GSC 2		Mexican Classification of Products and Activities	
Number	Code	Number	Code
48	otp	6010	Transport via railways
		6021	Other scheduled passenger land transport
		6022	Other scheduled passenger land transport
		6023	Freight transport by road
		6030	Transport via pipelines
		6301	Cargo handling
		6302	Storage and warehousing
		6303	Other supporting water transport activities
		6304	Activities of travel agencies and tour operators; tourist assistance activities n.e.c.
		6309	Activities of other transport agencies
49	wtp	6110	Sea and coastal water transport
		6120	Inland water transport
50	atp	6210	Scheduled air transport
		6220	Non-scheduled air transport
51	cmn	6411	National post activities
		6412	Courier activities other than national post activities
		6420	Telecommunications
52	ofi	6511	Central banking
		6519	Other monetary intermediation
		6591	Financial leasing
		6592	Other credit granting
		6599	Other financial intermediation n.e.c.
		6711	Administration of financial markets
		6712	Security broking and fund management
		6719	Activities auxiliary to financial intermediation n.e.c.
		6720	Activities auxiliary to insurance and pension funding
		7411	Legal activities
		7412	Accounting, book-keeping and auditing activities; tax consultancy
		7413	Market research and public opinion polling
		7414	Business and management consultancy activities
		7421	Architectural and engineering activities and related technical consultancy
		7422	Technical testing and analysis
		7430	Advertising
		7491	Labour recruitment and provision of personnel
		7492	Investigation and security activities
		7493	Industrial cleaning
		7494	Photographic activities
		7495	Packaging activities
		7499	Secretarial and translation activities
53	isr	6601	Life insurance
		6602	Pension funding
		6603	Non-life insurance
54	obs	7111	Renting of automobiles
		7112	Renting of water transport equipment
		7113	Renting of air transport equipment
		7121	Renting of agricultural machinery and equipment
		7122	Renting of construction and civil engineering machinery and equipment
		7123	Renting of office machinery and equipment, including computers

GSC 2		Mexican Classification of Products and Activities	
Number	Code	Number	Code
55	ros	9211	Motion picture and video activities
		9212	Motion picture projection
		9213	Radio and television activities
		9214	Artistic and literary creation and interpretation
		9219	Fair and amusement park activities
		9220	News agency activities
		9231	Library and archives activities
		9232	Museums activities and preservation of historical sites and buildings
		9233	Botanical and zoological gardens and nature reserves activities
		9241	Operation of sports arenas and stadiums
		9249	Gambling and betting activities
		9301	Washing and dry-cleaning of textile and fur products
		9302	Hairdressing and other beauty treatment
		9303	Funeral and related activities
		9309	Other service activities n.e.c.
56	osg	7511	General (overall) public service activities
		7512	Regulation of the activities of agencies that provide health care, education, cultural services and other social services, excluding social security
		7513	Regulation of and contribution to more efficient operation of business
		7521	Foreign affairs
		7522	Defence activities
		7523	Justice and judicial activities
		7530	Compulsory social security activities
		8021	General secondary education
		8022	Technical and vocational secondary education
		8030	Higher education
		8090	Adult and other education
		8511	Hospital activities
		8512	Medical practice activities
		8519	Other human health activities
		8520	Veterinary activities
		8531	Social work activities with accommodation
		8532	Social work activities without accommodation
		9000	Sewage and refuse disposal, sanitation and similar activities
		9111	Activities of business and employers organizations
		9112	Activities of professional organizations
		9120	Activities of trade unions
		9191	Activities of religious organizations
		9192	Activities of political organizations
		9199	Activities of other membership organizations n.e.c.
57	dwe	7010	dwellings