

# 11.J

## Argentina

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### 11.J.1 *Original Input-Output Data*

The data used in preparing the input-output (I-O) table for the Argentine economy came from a 2000 Social Accounting Matrix (SAM) for Argentina documented in *Matriz de Contabilidad Social 2000* by Maximiliano Méndez Parra and Gerardo Luis Petri.<sup>1</sup>

The original data sources used to construct the SAM include national account statistics, government budget data, the official 1997 input-output table, COMTRADE data and working papers about costs of production in the agri-food industry. It is important to note that the original SAM was developed with an emphasis on the agri-food sector. The original SAM includes 72 productive sectors, of which the agri-food sector is disaggregated into 55 sectors. There are 3 factors of production (land, capital and labor) and one account each for business, households, government, savings-investments and the rest of the world. The unit of accounts is 2000 million Argentine pesos or US dollars.<sup>2</sup> Flows in the SAM are expressed in terms of basic prices. Appendix 1 provides a summary of the construction process for the 2000 Social Accounting Matrix, source of the I-O table contributed to GTAP.

### 11.J.2 *Mapping Procedure*

As mentioned above, the SAM was a particular disaggregation of the 1997 *Matriz de Insumo-Producto* (MIP) with a particular emphasis on the agri-food sector, i.e. the main effort was on disaggregating the MIP 97 original agri-food sectors into new sectors in the SAM. The rest of the productive sectors, which in the MIP 97 have a very important level of disaggregation, were aggregated in the SAM.

The high level of disaggregation of the agri-food sector in the SAM facilitates the mapping with the GTAP sectors (see Appendix Table 11.J.A2). Some minor adjustments, particularly in the agricultural services sector, were needed. This sector involves the use of agricultural services (plowing, sowing, harvesting, planting, etc.) hired by the farmer, i.e. the farmer pays to have these services rendered by a contractor. As these are particular agricultural tasks that are included in the

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<sup>1</sup> 2002, Buenos Aires, Argentina: Secretariat of Agriculture, Livestock-farming, Fisheries and Food.

<sup>2</sup> Between 1991 and 2001, the exchange rate was fixed by a currency board at one peso-one US dollar.

agri-food sector in GTAP, it was necessary to impute this sector into the GTAP agri-food sectors according to the production cost structures.

In addition, with mining, industry and services, it was necessary to adjust the original SAM sectors in order to adapt them to the GTAP sectors. However, since these sectors were simply aggregated in the SAM, it was relatively easy to disaggregate them again to map with the GTAP sectors.

### ***11.J.3 Other Considerations***

The dwellings sector (dwe) in GTAP is not included in the original SAM as an independent sector. It is included in the “Services” sector. It was therefore necessary to remove dwellings from “Services.” This was done with the help of information provided in the Argentine National Accounts. Due to lack of cost data and in order to minimize further imbalances of the original data, the cost structure imposed for the dwellings sector is an 80/20 percent split between capital and labor.

After the I-O table was created, a standard comparison of the I-O table with a representative I-O table was done at the GTAP Center (see chapter 11.A). This comparison revealed some share discrepancies between the two tables. Some of them were mapping errors but others were particular issues inherent to Argentina’s production technology. Explanations about these unusual shares are available upon request.

#### ***References***

- Instituto Nacional de Estadística y Censos.* 1998. *Encuesta de Gasto de los Hogares 1996-97.* Buenos Aires, Argentina: INDEC.
- Instituto Nacional de Estadística y Censos.* 2001. *Matriz de Insumo Producto Argentina 1997.* Buenos Aires, Argentina: INDEC.
- Secretaria de Agricultura, Ganaderia, Pesca y Alimentos.* 2002. *La Matriz de Contabilidad Social del Sector Agroalimentario - Construcción de la Primera Versión.* Buenos Aires, Argentina: SAGPyA.
- Méndez Parra, M. and Petri, G. L. 2003. *The 2000 Social Accounting Matrix for Argentina.* Washington, D.C.: International Food Policy Research Institute.

## *Appendix 1*

# *The 2000 Social Accounting Matrix for Argentina*

### *Introduction*

Argentina's SAM is based mainly on the disaggregation of the sectors of the 1997 Argentina's Input-Output Matrix (MIPA 97) built by the INDEC. This 124x124 matrix constitutes the best input-output matrix built in Argentina. Since the MIPA 97 shows all the Argentine economy's transactions, the disaggregation process was focused on the opening of the agri-food sectors and the aggregation of some sectors, which were of no interest for the analysis that was being conducted.

The disaggregation process consisted of two parts. First, the disaggregation of the MIPA 97 was made using cost structures for the year 1997. Then, once the new matrix technical coefficients were obtained, the upgrade to the year 2000 was done.

### *The 1997 Input-Output Matrix*

The construction of the 1997 Input-Output Matrix started at the end of 1997 and the final paper was released in 2001. The whole publication has 15 matrices. Four of them are required for the input-output analysis – the Input-Output Matrix itself (124x124), the direct requirement matrix, the indirect and direct requirement matrix, and the employment requirement matrix.

Without explaining the whole work procedure<sup>3</sup>, the entire work consisted in the building of some previous matrices that were used to build, later, the input-output matrix.

First, a commodity supply matrix at basic prices was built; this matrix included the national GVP (Gross value of product) at basic prices, the foreign supply (*cif* imports), product net taxes (non deductible VAT), direct taxes, gross sales and product import tariff, the commerce and transport margins, and the imported product nationalization outlays. By doing the right operations, the total supply at producer and purchaser prices was obtained.

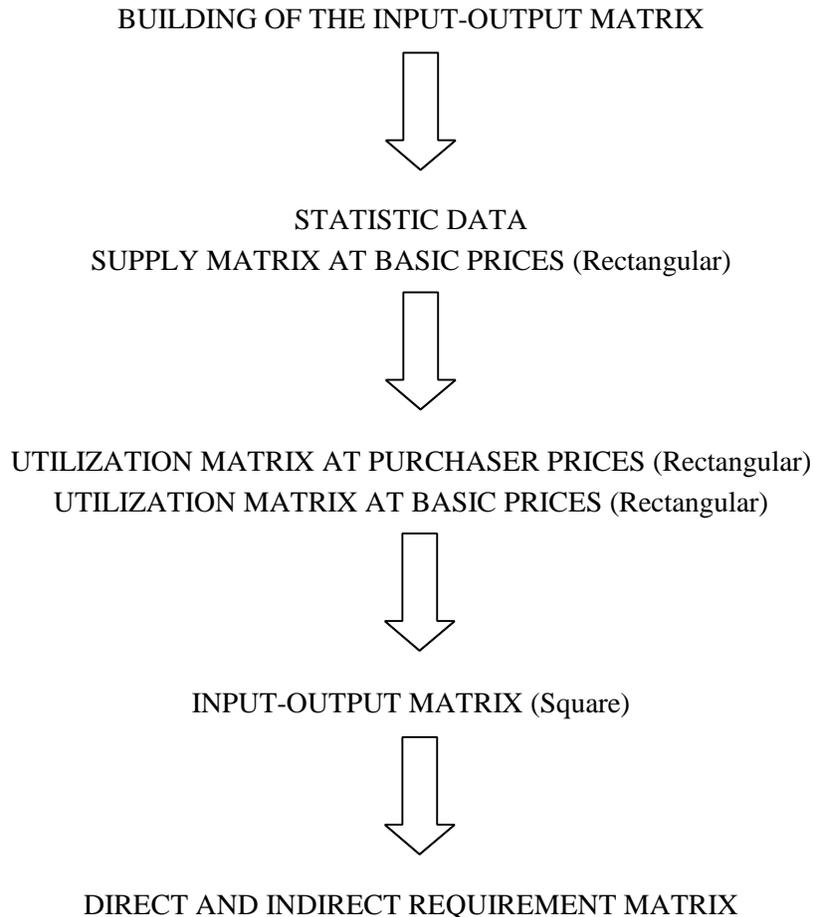
Second, a utilization matrix at purchaser prices was built. This includes the intermediate uses of the total supply at purchaser prices (purchase of products as inputs) and the final use of the total supply at purchaser prices (*FOB* exports, private consumption, public consumption, domestic gross investment). The sum of both components (intermediate use and final use) corresponds to the total demand at purchaser prices. On the other hand, by doing the right operations, the gross value added at basic prices is obtained.

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<sup>3</sup> For more details see *Matriz de Insumo Producto Argentina 1997, 2001*, Buenos Aires, Argentina: INDEC. Available at [www.indec.gov.ar](http://www.indec.gov.ar).

Once the supply and demand balances are reached, by doing some matrix algebra, the utilization at basic prices is transformed into an input-output matrix.

The following figure illustrates the procedure.



***The Micro SAM Construction Process***

At the first stage, which consisted in opening the MIPA 97 activities, 1997 product cost structures were used. These were provided by different SAGPyA specialized areas (Agriculture Direction, Livestock Farming Direction and Agricultural Economy Direction) and some private experts were consulted.

The production of agri-food products<sup>4</sup> were aggregated in the MIPA into the following activities:

- Crops of cereals, oilseeds and coarse grains
- Crops of vegetables, pulses, flowers and ornamental plants
- Crops of fruits and nuts
- Fishing
- Industrial crops
- Farm products

Within each sector of the MIPA 97, a sub-matrix which disaggregated the sector according to the desired product level (i.e. the MIPA 97 fishing sector was opened into Hake, Squid, King Prawn, and other fish captures.) was built.

By analyzing the cost structures per product, the intermediate demands for each product were identified, which means at which activity its demand of inputs was aimed. Then, a sector of the MIPA 97 was assigned according to the MIPA 97 classification. On the other hand, the final destination of the supply (exports, consumption and investment) and the intermediate destination were identified.

One of the essential aspects of working with production costs lies on the different production technologies. For example, the GM soybean has different technical coefficients due to the different use of inputs. The same happens with the use of direct sowing. On the other hand, the varied geographical characteristics of Argentina's areas generate not only different yields but also different use of inputs for the production of a particular product.

In that way, it was needed to collect different cost structures for the main production technologies and estimate their weight in the total production. Thus, the underlying technology in the SAM is a mix of technologies weighted by their shares in the total production.

When there was not enough information to do this process and neither did demands to sectors that cannot be identified in the product cost structures exist in the MIPA 97, it was assumed that the demand of that particular product of some input repeated its share in the gross value of product.

Once those sub-matrices are built and the horizontal and vertical sums are made, the corresponding coefficients that would be used for the MIPA 97 values to make the disaggregation were obtained, thus resulting in an extended input-output matrix.

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<sup>4</sup> Wheat, maize, rice, malting barley, sorghum, other cereals, soybeans, sunflower, peanut, other oilseeds, lemon, orange, tangerine, apple, pear, fresh grape (not for wine purposes), other fruits and nuts, potato, onion, tomato, garlic, kidney beans, other leaf vegetables, other vegetables and pulses, cotton, sugar cane, yerba mate, wine grape, other industrial crops, hake, squid, king prawn, other fish captures, poultry, eggs, natural honey, and other farm products and minor livestock

Since there were some sectors in the MIPA 97 that lack interest for the agricultural and food analysis or had little production relationships with the agricultural sector (i.e. there was neither source nor destination of inputs), those sector were aggregated in different macro-sectors.

As a result of the disaggregation and aggregation process, an input-output matrix of 72 sectors, with 55 agricultural and food sectors, was obtained. Table 11.J.A1 lists the 72 sectors in the SAM.

Once the new input-output matrix was built, it was incorporated in the larger frame of the social accounting matrix. From this first matrix, the intermediate destinations were obtained. Moreover, it was necessary to estimate the final destination, the factor utilization and the payment of taxes.

### ***Production Factors***

The production factors included in the SAM are labor, land and capital. Labor, as well as capital, is considered as a homogeneous factor without any kind of division (rural, unskilled, etc.)

The labor demand was estimated using the value in the MIPA 97, the INDEC Permanent Households Survey and the cost product structures. The average wages are those obtained in the MIPA 97.

### ***Households***

Using data from the INDEC Household Consumption Survey and other sources, the household consumption for the different products was estimated. This data was revised at the balancing stage in order to keep consistency with the basic economic equation.

Since the Household Consumption Survey analyzes patterns of consumption among different regions in Argentina, it was needed to compute the demand of each region with its share in the total population. It is important to remark that in this first version of the SAM there is no distinction among kinds of households (rural, urban, poor, etc.)

### ***Business***

In all the work, it was assumed that companies receive the capital payment. That is, there is no payment between factors. Households only received payment for labor and companies received payment for capital. Later, companies made payments to households.

As stated above, companies' payments (capital payments) are the residual part from the value added after payments to labor (gross production surplus). Again, companies are completely homogeneous.

Appendix Table 11.J.A1 Sectors in Argentina SAM

Category	Description	Category	Description
CTRIGO	Wheat	CSERVAGRO	Agricultural services
CMAIZ	Maize	CSILVI	Forestry
CARROZ	Rice	CMERLUZA	Hake captures
CCEBADA	Malting barley	CCALAMAR	Squid captures
CSORGO	Sorghum	CLANGOSTINO	King prawn captures
COTCEREAL	Other cereals	COTFISH	Other captures
CSOJA	Soybean	COIL	Oil and mining
CGIRASOL	Sunflower	CCARNE	Meat (bovine, sheep, pork, chicken, etc)
CMANI	Penaut	CELABFISH	Fish and selfish elaborated
COTOLEAG	Other oilseeds	CELABVEGFR	Fruits and vegetables elaborated
CPAPA	Potato	CACEITES	Vegetables oils and animal fats
CCEBOLLA	Onion	CLACTEOS	Dairy products
CAJO	Garlic	CMOLINERIA	Cereals flours
CPOROTO	Kidney bean	CMANTRIGO	Manufactures of wheat (cookies, dried pasta, etc)
CTOMATE	Tomato	CMANAZUCAR	Sugar, candies, chocolate
CTVHOJA	Other leaf vegetables (lettuce, spinach, etc)	COTALIMEN	Other food products (Oilseed cakes, feed products)
COTGEGLUG	Other vegetables and pulses	CALCOHOL	alcoholic beverages
CLIMON	Lemon	CNOALCOHOL	Non-alcoholic beverages
CNARANGA	Orange	CTABACO	Cigarettes and tobacco elaborated
CMANDARINA	Tangerine	CTEXTIL	Textile fibers
CMANZANA	Apple	CVESTIR	Clothing and apparel
CPERA	Pear	CCUERO	Leather and products of leather
CUVAMESA	Fresh grape	CMADERA	Products made of wood
COTFRUTYNU	Other fruits and nuts	CPAPEL	Paper and printing products
CALGOD	Cotton	CREFOIL	Petrol and oils
CCANAZU	Sugar cane	CQUIMICA	Chemistry
CYERBA	Yerba mate	CCAUCHO	Rubber and plastic products
CUVAVIN	Wine grape	CMETAL	Metals smelthin
CTABAC	Tobacco	CPRDMETAL	Products made of metals
COTINDCROP	Other industrial crops	CMAQUINA	Machinery - Agricultural machinery
CSMILLAS	Seed for sowing production	CAUTOS	Automobiles and other vehicles
CGANADO	Livestock, milk	COTMANUF	Other manufactures
CGRANJA	Poultry, honey, eggs	CELECTRI	Electricity
CPOLLO	Poultry	CCONSTR	Building - Construction
CHUEVO	Eggs	CGOBIERNO	Government
CMIEL	Natural honey	CSERVICIOS	Services (networks, commerce, transportation, communications, education, health care, finance, banking)
COTGRANJA	Other farm products and minor livestock		

### ***Government***

Government includes the national public sector, i.e. the Federal Government, provincial governments and city governments. Governmental investment data were provided by the DNIP, while governmental purchases were obtained from the DNGC.

In order to analyze the tax collection and transfers from the Social Security System, information from the AFIP was used. This data include taxes on labor, income and the value added tax. On the other hand, the tax collection by the provincial and city governments as well as transfers were based on data from the DNGC. The tariff collection data was taken from the AFIP.

### ***Savings-Investment***

Data from the DNCN and geometric capital estimations made by the DNCPM were used. From the basic economic identity, it was estimated the stock change. The capital depreciation was based on DNCN estimation of the stock of capital by sector. For this estimation, different depreciation coefficients were used according to the sector.

### ***Rest of the World***

In the SAM seven countries or groups of countries are opened: Brazil, Mexico, Canada, United States, European Union, Rest of Latin America and Rest of the World. All the trade data (exports and imports) are based on the information given by the Argentine Customs (AFIP).

### ***Final Balancing***

Once the SAM was built, it was not properly balanced because of differences in the valuation of magnitudes from supply and demand. One approach to balance the matrix is that developed by Robinson and El-Said (2000), known as the cross entropy method. In simpler terms, this approach organizes all the information available from alternative sources in different years (the 'prior' data) in a matrix (the original SAM). These data are assumed to differ from an objective matrix - the balanced SAM. These discrepancies can be thought as distances, which in mathematical terms can be minimized. This optimization process is subject to a set of constraints in the form of unchanged reliable data points.

However, due to the disaggregation and as this SAM was developed from a well balanced input-output matrix, magnitudes that could be adjusted using the cross entropy method were not enough. To balance the matrix correctly, the figures of the stock change were adjusted so that the total sum of rows and columns, which corresponds to the supply and demand, were equal. This procedure is the one effectively used by the DNCN in doing its estimations. This makes the stock change figures be in some cases overestimated and in other cases underestimated.

With respect to the balance of the production gross value and the value added, it was possible to estimate the wage component appropriately, but the gross surplus used to be estimated as a residual

due to the lack of reliable statistics. Adjustments to balance the SAM were made to these variables in order to reach the correct balance between rows and columns.

Components related to transfers between institutions (transfers to households or companies, transfers from the rest of the world, etc.) are those which have the best estimation and, thus, the adjustments made were minimal.

#### *Update to the Year 2000*

The SAM was built on data from 1997 but was updated to 2000, the last year of 'normal' economic activity for Argentina. In order to do this update, the DNCN provided information on the gross production value and supply and demand by sector.

The updating process consisted in using the technical coefficient from the SAM 1997 and applying total values from 2000 to the row and columns. As a result, a SAM with final 2000 values was obtained, but it keeps the relative price structure (and technology) of 1997.

*Appendix 2*

Table 11.J.A2 Mapping between GTAP Sectors, SAM Sectors, and MIP 1997

GTAP Sector	SAM Sector Code	SAM Sector Description	MIP 1997 Code	MIP 1997 Description	
pdr	ARROZ	Rice	1	Cereals and oilseeds crops	
	SERVAGRO	Agricultural Services	8	Agricultural Services	
	SEMILLAS	Seeds and planting material	5	Seeds production	
wht	TRIGO	Wheat	1	Cereals and oilseeds crops	
	SERVAGRO	Agricultural Services	8	Agricultural Services	
	SEMILLAS	Seeds and planting material	5	Seeds production	
gro	CEBADA	Malting barley	1	Cereals and oilseeds crops	
	SORGO	Sorghum	1	Cereals and oilseeds crops	
	MAIZ	Maize	1	Cereals and oilseeds crops	
	OTCEREA	Other cereals	1	Cereals and oilseeds crops	
	SERVAGRO	Agricultural Services	8	Agricultural Services	
	SEMILLAS	Seeds and planting material	5	Seeds production	
	v_f	PAPA	Potato	2	Horticulture crops
CEBOLLA		Onion	2	Horticulture crops	
AJO		Garlic	2	Horticulture crops	
POROTO		beans	2	Horticulture crops	
OTVHOJA		Other leaf vegetables	2	Horticulture crops	
OTVEGLUG		Other vegetables and pulses	2	Horticulture crops	
LIMON		Lemon	3	Fruits and nuts crops	
NARANJA		Orange	3	Fruits and nuts crops	
MANDARINA		Tangerine	3	Fruits and nuts crops	
MANZANA		Apple	3	Fruits and nuts crops	
PERA		Pear	3	Fruits and nuts crops	
UVAMESA		Fresh grape	3	Fruits and nuts crops	
OTFRUTYNU		Other fruits and nuts	3	Fruits and nuts crops	
SERVAGRO		Agricultural Services	8	Agricultural Services	
SEMILLAS		Seeds and planting material	5	Seeds production	
osd		SOJA	Soybeans	1	Cereals and oilseeds crops
		MANI	Peanuts	1	Cereals and oilseeds crops
		GIRASOL	Sunflower	1	Cereals and oilseeds crops
		OTOLEAG	Other oilseeds	1	Cereals and oilseeds crops
		SERVAGRO	Agricultural Services	8	Agricultural Services
	SEMILLAS	Seeds and planting material	5	Seeds production	
c_b	CAÑAAZ	Sugar cane	4	Industrial crops	
	SERVAGRO	Agricultural Services	8	Agricultural Services	
	SEMILLAS	Seeds and planting material	5	Seeds production	
pfb	ALGODÓN	Cotton	4	Industrial crops	
	SERVAGRO	Agricultural Services	8	Agricultural Services	
	SEMILLAS	Seeds and planting material	5	Seeds production	
ocr	UVAVINIF	Wine grappe	4	Industrial crops	
	YERBA	Yerba mate	5	Industrial crops	
	TABACO	Tobacco	6	Industrial crops	
	OTCULIND	Other industrial crops	7	Industrial crops	
	SERVAGRO	Agricultural Services	8	Agricultural Services	
	SEMILLAS	Seeds and planting material	5	Seeds production	

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Table 11.J.A2 Mapping between GTAP Sectors, SAM Sectors, and MIP 1997 (Contd)

GTAP Sector	SAM Sector Code	SAM Sector Description	MIP 1997 Code	MIP 1997 Description
ctl	GANADO	Cattle, milk, wool and hair	6	Livestock-farming, milk, wool and hair
oap	GANADO	Cattle, milk, wool and hair	6	Livestock-farming, milk, wool and hair
	POLLO	Poultry	7	Farm production
	HUEVOS	Eggs	7	Farm production
	MIEL	Honey	7	Farm production
rmk	GANADO	Cattle, milk, wool and hair	6	Livestock-farming, milk, wool and hair
wol	GANADO	Cattle, milk, wool and hair	6	Livestock-farming, milk, wool and hair
for	SILVIC	Forestry	10	Silviculture
	SERVAGRO	Agricultural Services	8	Agricultural Services
	SEMILLAS	Seeds and planting material	5	Seeds production
fish	MERLUZA	Hake	11	Fishing
	CALAMAR	Squid	11	Fishing
	LANGOSTINO	King prawn	11	Fishing
	OTFISH	Other fish captures	11	Fishing
	OIL	Oil, gas and others	12	Oil, gas, coal and uranium mining
oil, gas,	OIL	Oil, gas and others	13	Metal mining
omn,			14	other mineral mining
coal				
cmt	CARNE	Animals slaughtering and manufacturing of meats	15	Slaughtering of animal and meat processing
omt	CARNE	Animals slaughtering and manufacturing of meats	15	Slaughtering of animal and meat processing
vol	ACEITES	Vegetables and animal oils and cakes	16	Oils and oilseeds products
mil	LACTEOS	Dairy products	19	Dairy products
pcr	MOLINEARIA	Milling products	20	Milling of cereals
sgf	MANAZUCAR	Sugar manufactures	23	Sugar
ofd	MANTRIGO	Wheat manufactures	25	Dried pasta
	ELABVEGFR	Processed fruits, vegetables and pulses	17	Vegetable and fruit processed
	MOLINEARIA	Milling products	20	Milling of cereals
	MANAZUCAR	Sugar manufactures	24	Chocolate and candy products
	OTALIMEN	Other food products	26	Other food products
			21	Feeding products
			22	Bakery products
	ELABFISH	Fish and selfish elaborated	16	Fish and selfish elaborated
b_t	ALCOHOL	Alcoholic beverages	27	Alcoholic beverages
			28	Wine production
			29	Beer
	NOALCOHOL	Non alcoholic beverages	30	Bottled water, sodas
			17	Vegetable and fruit processed
	CIGAR	Tobacco products	31	Tobacco manufactures

Continued

Table 11.J.A2 Mapping between GTAP Sectors, SAM Sectors, and MIP 1997 (Contd)

GTAP Sector	SAM Sector Code	SAM Sector Description	MIP 1997 Code	MIP 1997 Description
tex	TEXTIL	Textile products	32	Textile fibers and spinning
			33	Finishing of textile and spinning products
wap	VESTIR	Wearing apparel	35	Jersey products
			36	Wearing apparel
			34	Textile products production
lea	CUERO	Leather products	37	Tanning and finishing of leathers
			38	Leatherwork products
			39	Shoes production
			41	Wood and wood products
lum	MADERA	Wood products	40	Sawmills
			42	Paper and paper paste
ppp	PAPEL	Paper products and publishing	44	Paper products
			45	Books - brochures editions
			46	Newspapers and magazines editions
			47	Printing and edition of other products
			48	Fuel production
			49	Basic Chemistry
			50	Fertilizers and plaguicides
p_c crp, nmn	REFOIL QUIMICA	Fuel production Chemical products	51	Plastic Raw materials and synthetic rubber
			52	Paints and burnish
			53	Medic products
			54	Soaps, detergents and related products
			55	Other chemical products
			56	Synthetic fibbers manufactures
			57	Tyres
			58	Rubber products
			60	Glass products
			61	Ceramic products
			62	Clay products
			59	Plastic products
			63	Cement, lime, plaster
			64	cement and concrete products
i_s, nfm	METAL	Metal production	65	Basic industries of iron and steel
			67	Metal melting
			66	No ferrous metalworking
fmp	METAL PROD	Metal products	68	Metal structures, tanks, deposits
			69	Metal forge and laminated
			70	Knives, hand tools, etc
			71	Other metal products

Continued

Table 11.J.A2 Mapping between GTAP Sectors, SAM Sectors, and MIP 1997 (Contd)

GTAP Sector	SAM Sector Code	SAM Sector Description	MIP 1997 Code	MIP 1997 Description			
ele, ome	MAQUINA	Machinery and equipment	72	Engines, pumps, turbines			
			73	Ovens, elevators and general equipment			
			74	Tractors and agricultural machinery			
			75	Other special machinery			
			78	Engines, generators and electric transformations			
			79	Electric distribution and generation equipment			
			mvh, otn	AUTOS	Vehicles and transport equipment	86	Automobile equipment
						87	Bodywork and trailers
						89	Ships, locomotives and airplanes
90	Motorbikes, bikes and other type or transport						
88	Automobile parts						
omf	OTMANUF	Other manufactures	76	Household machinery			
			77	Office machinery and computers			
			82	Electric lamps and illumination machinery			
			80	Wires and metal strings			
			81	Batteries			
			83	TV, radio and telephone broadcasting equipment			
			84	TV and radio sets			
			85	Optical and medical equipment			
			91	Furniture and mattress			
			92	Other manufactures			
			93	Electricity			
ely gdt	ELECTRI	Electricity	94	Gas			
			95	Water			
wtr	SERVICIOS	Services	96	Construction			
cns trd	CONSTR	Construction	97	Retail trade			
			98	Wholesale trade			
otp	SERVICIOS	Services	98	Hotels			
			100	Restaurants			
			101	Passenger land transport			
			102	Load land transport			
			103	Pipeline transport			
			106	Other complementary transport activities			
			104	Water transport			
wtp	SERVICIOS	Services	105	Air transport			
atp	SERVICIOS	Services	107	Post - mail			
cmn	SERVICIOS	Services	109	Financial institutions			
ofi	SERVICIOS	Services	110	Insurances			
isr	SERVICIOS	Services					

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Table 11.J.A2 Mapping between GTAP Sectors, SAM Sectors, and MIP 1997 (Contd)

GTAP Sector	SAM Sector Code	SAM Sector Description	MIP 1997 Code	MIP 1997 Description
obs	SERVICIOS	Services	111	Professional and enterprises products
			112	Real state
			118	Vet services
			124	Household services
ros	SERVICIOS	Services	122	Television and radio broadcasting, cinemas
			123	Cultural and sport services
			121	Associations services
osg	GOBIERNO	Public administration, defence and compulsory social security programs	113	Public administration, defence and compulsory social security programs
	SERVICIOS	Services	116	Public health services
			117	Private health services
			114	Public education services
			115	Private education services
			119	Social services
			120	Drainage services
dwe	SERVICIOS	Services		