

Philippines

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1. Introduction

This document summarizes the steps to convert the year 2000 Input-Output (I-O) table of the Philippines (NSCB, 2006) into GTAP format. Although the original I-O table contains detailed sectors, further processing was required to address abnormalities in the raw data and to transform the table into the required GTAP format. All data processing was undertaken using GEMPACK software.

2. I-O Table Features

- Symmetric I-O table with 240 industries and commodities valued at producer (tax-inclusive: basic + tax) prices. Margins are directly charged to the using sector.
- The USE table shows the values of wages, depreciation, operating surplus, and indirect taxes net of subsidies.

3. Challenges

No separate basic and tax matrices

- An imports vector. Use of commodities by industries and by the five final users—private expenditure, government expenditure, investments, changes in stocks and exports—not distinguished by sources (i.e., domestic + import).
- Absence of detailed import duties by commodities. Instead, an aggregate import duty is recorded as a scalar—found along the intersection of indirect taxes and Imports.
- There are of 11 manufacturing sectors with re-exports (exports of imports)

4. Processing

- An initial check was made to ensure that I-O balance conditions are satisfied.
- Exports of commodities with re-exports were reduced by using exports shares, of the same commodity, from the 1994 I-O table. The residual between the original and the computed value of exports was then assigned to changes in stocks
- Import tariff revenue was computed using the applied tariff rate, obtained from the Philippine Tariff Commission, for each I-O commodity. The computed commodity-specific tariff revenue was then rescaled to conform to total import tariff revenue in the original I-O table.
- The sector ‘agricultural services’ was eliminated and re-allocated to all agricultural sectors. After re-allocation, a RAS procedure (Horridge 2010) was used to balance the I-O table.
- The I-O table was converted to GTAP format using the suite of files detailed in Horridge *et al.* (2008). Among others, this resulted in a separate basic and tax matrices for domestic and imported goods.

5. Improvements

- Modified the treatment of re-exports. Previous method resulted in unusually high share of changes in stocks to total sales in imported ELE.
- Improved mapping between original I-O table and GTAP sectors (These include: rice and corn milling; steam, electricity and gas; other agricultural products, wool and raw milk)

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6. Concordance

- The 240 I-O sectors were mapped to 50 intermediate sectors then to 57 GTAP sectors (see Table 1 for details).
- The submitted I-O table in GTAP format contains 50 sectors, of which 6 are aggregated (WHTGRO, OAPWOLRMK, OILGAS, CMTOMT, PCROFD, ELYGDT) and subsequently disaggregated at the center.

Table 1: Concordance between Philippine I-O table and GTAP sectors

No.	OSEC	GTAP	No.	OSEC	GTAP	No.	OSEC	GTAP
1	Paddy	PDR	41	MinOilNtGas	OILGAS	81	Handicraft	OMF
2	Corn	WHTGRO	42	MinONnMtl	OMN	82	Leather	LEA
3	Coconut	OSD	43	MeatSlaught	CMTOMT	83	Vinyl	CRP
4	Banana	V_F	44	MeatProcess	CMTOMT	84	Tailoring	WAP
5	Sgr_b	C_B	45	MilkProcess	MIL	85	RTW	WAP
6	VegOil	V_F	46	Butter	MIL	86	Embroidery	TEX
7	Rootcrop	OCR	47	IceCream	MIL	87	ApparlXFoot	WAP
8	Pineap	V_F	48	DairyOther	MIL	88	LeathrFoot	LEA
9	Mango	V_F	49	FruitsVege	PCROFD	89	Wood	LUM
10	Fruits	V_F	50	FishCan	PCROFD	90	Plywood	LUM
11	OFruits	V_F	51	FishOther	PCROFD	91	Hardboard	LUM
12	Tobacco	OCR	52	CocoOil	VOL	92	WoodDry	LUM
13	Fibcrp	PFB	53	VegeOil	VOL	93	Millwork	LUM
14	OFibcrp	PFB	54	RefCocoOil	VOL	94	WoodCane	LUM
15	Coffee	OCR	55	RiceCrmMill	PCROFD	95	WoodCarv	LUM
16	Cocoa	OCR	56	FlourMill	PCROFD	96	WoodMisc	LUM
17	Rubber	OCR	57	Bakery	PCROFD	97	WoodFurn	OMF
18	HerbPlnt	OCR	58	Noodles	PCROFD	98	FurnRepRat	OMF
19	Ocrops	WHTGRO	59	SugarMill	SGR	99	OFurnRep	OMF
20	AgServ	FRS	60	Confection	PCROFD	100	PulpPaper	PPP
21	Hog	OAPWOLRMK	61	DesCoconut	PCROFD	101	PaperBoard	PPP
22	Cattle	CTL	62	Ice	PCROFD	102	OPaperBoard	PPP
23	Buffalo	CTL	63	CoffeeRoast	PCROFD	103	Newspaper	PPP
24	Olivestk	OAPWOLRMK	64	AnimalFeeds	PCROFD	104	BookPrint	PPP
25	Chicken	OAPWOLRMK	65	Starch	PCROFD	105	Printing	PPP
26	Poultry	OAPWOLRMK	66	FlavorExtr	PCROFD	106	LeatherTann	LEA
27	Egg	OAPWOLRMK	67	FoodOther	PCROFD	107	OLeather	LEA
28	FishOc	FSH	68	LiquorWine	B_T	108	RubberTire	CRP
29	Fishland	FSH	69	Malt	B_T	109	RubberFootw	LEA
30	Pearl	FSH	70	Softdrinks	B_T	110	RubberNEC	CRP
31	Seaweed	FSH	71	BotldWater	B_T	111	BasicChemls	CRP
32	OFish	FSH	72	Cigarette	B_T	112	Fertilizers	CRP
33	For	FRS	73	TobacoCig	B_T	113	Resins	CRP
34	Copper	OMN	74	TobacLeaf	B_T	114	Pesticides	CRP
35	Gold	OMN	75	Textile	TEX	115	Paints	CRP
36	MinChrom	OMN	76	Fabric	TEX	116	Drugs	CRP
37	MinNikel	OMN	77	Hosiery	WAP	117	Soaps	CRP
38	MinOMetal	OMN	78	TextXWear	WAP	118	Perfumes	CRP
39	Quarry	OMN	79	Carpets	TEX	119	MiscChemls	CRP
40	MinCoal	COA	80	Rope	TEX	120	PlstcFurn	CRP

Table 1 (Continued): Concordance between Philippine I-O table and GTAP sectors

No.	OSEC	GTAP	No.	OSEC	GTAP	No.	OSEC	GTAP
121	RefPetrol	P_C	161	MotorAlter	MVH	201	NonBank	OFI
122	MiscPetrol	P_C	162	MotorParts	MVH	202	Pawnshop	OFI
123	Pottery	NMM	163	MotoBike	OTN	203	Insurance	ISR
124	Glass	NMM	164	MachRebuild	OTN	204	InsuranceNEC	ISR
125	GlassCont	NMM	165	ScientMach	OME	205	Real Estate	OBS
126	GlassOther	NMM	166	PhotoOptic	OME	206	Dwellings	DWE
127	Cement	NMM	167	Watch	OME	207	PublicEduc	OSG
128	Clay	NMM	168	FurnRepMet	OMF	208	PubHealth	OSG
129	Concrete	NMM	169	Jewelry	OMF	209	PubDef	OSG
130	ManNnMetal	NMM	170	MusicInstru	OMF	210	PrivEduc	OSG
131	SteelFurna	I_S	171	SportAthlet	OMF	211	PrivMedic	OSG
132	IronSteel	I_S	172	SurgDental	OME	212	MedicOther	OSG
133	Smelting	NFM	173	OphthalGoods	OME	213	Legal	OBS
134	NonFer	NFM	174	Toys	OMF	214	ProfServs	OBS
135	Cutlery	FMP	175	OfcSupplies	OMF	215	EngServ	OBS
136	MetalProds	FMP	176	ManufacNEC	OMF	216	Advertise	OBS
137	MetlContain	FMP	177	Construct	CNS	217	EquipRent	OBS
138	MetlEngrav	FMP	178	Electricity	ELYGDT	218	Cons	OBS
139	WireNails	FMP	179	SteamGas	ELYGDT	219	LabRecruit	OBS
140	OtherWire	FMP	180	Water	WTR	220	Detective	OBS
141	LightNnElec	FMP	181	Railway	OTP	221	BusActNEC	OBS
142	FabricMetal	FMP	182	Bus	OTP	222	BusOthers	OBS
143	AgriMach	OME	183	Taxi	OTP	223	Hotels	TRD
144	MtlWdMach	OME	184	ORoadTrans	OTP	224	OHotels	TRD
145	Engines	OME	185	RentACar	OTP	225	Restau	TRD
146	OfcMachs	ELE	186	Freight	OTP	226	CompHCons	OBS
147	PmpsAirCon	OME	187	SeaTransp	WTP	227	CompCcons	OBS
148	NnElecMachs	OME	188	InH2OTrans	WTP	228	CompOcons	OBS
149	ElecMacs	OME	189	SupportServ	OTP	229	OfcRepair	OBS
150	RadioTVmach	ELE	190	AirTransp	ATP	230	Photograph	OBS
151	CommEquip	ELE	191	TravlAgenc	OTP	231	BPO	OBS
152	RadioParts	ELE	192	TransNEC	OTP	232	SocialWork	OSG
153	ApplHouse	ELE	193	Warehouse	OTP	233	Seawage	OSG
154	SemiCond	ELE	194	Postal	CMN	234	FilmProd	ROS
155	Batteries	OME	195	Telephone	CMN	235	FilmProject	ROS
156	Cables	OME	196	WirePhone	CMN	236	RadioTVServ	ROS
157	WireCond	OME	197	Otelecom	CMN	237	Orecreation	ROS
158	ElecLamps	OME	198	Trade	TRD	238	WashClothe	ROS
159	ShipsBoat	OTN	199	MtrvhclRep	TRD	239	HairParlor	ROS
160	MotorVehcls	MVH	200	Banking	OFI	240	ServicesNEC	ROS

References

NSCB 2006. Year 2000 Input-Output Table of the Philippines, National Statistical and Coordination board, Makati City.

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