

P Colombia

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P.1 Introduction

In Colombia, the construction of input-output tables is of great value due to the analyses that can be made from them and their importance in the construction of CGEMs. However, the main interest in collaborating with GTAP's work is part of the effort to keep updated models such as the Multi-Country model developed by Light and Rutherford (2003) and used by the DEE (Dirección de Estudios Económicos) from DNP (Departamento Nacional de Planeación).

Similarly, it is important to continue with the contributions to GTAP which have been made over the years: Echavarría and Arbeláez (1998), Guerrero (2002), Perdomo (2006, 2008) and Céspedes and Piraquive (2013). In addition, as in the last contribution for GTAP 8v, the base year used in the construction of the 2014 I-O table for GTAP 10v is 2005. This document describes briefly where the data in the table provided came from and how it was imputed, the main problems presented in obtaining and using the data and how these were addressed.

P.2 Procedure

The Input-Output table for Colombia in GTAP 10v was built based on the information provided by the DANE (Departamento Administrativo Nacional de Estadística) for 2014. During the construction process, three important tables of the activity by product type were used: Use Table (MU), Supply Table (MO) and the Supply and Use Balance (BOU), both for 2014 and 2005. Since the sectoral structure of the two-digit National Accounts from DANE cannot directly follow the structure required by GTAP, the first step consisted of constructing correlation tables between the six-digit DANE classification and the GTAP classification.

Then, a Social Accounting Matrix (SAM) was elaborated for 2014 by separating MU between domestic and imported with the GTAP disaggregation. The next step was taking the activity-product SAM to a product-product table, through an adaptation of the methodology of Miller and Blair (2009), using a Production Technology by Industry (TPI) for product-product tables. Third, an agricultural use table (2005), provided by DANE, was used to disaggregate the cost structure of the agricultural sectors; and, finally, the GEIH (Gran Encuesta Integrada de Hogares) 2014 was used to establish the distribution structure of remuneration to capital and labor factors.

Throughout each of the steps followed, it was confirmed that the matrices were balanced and, using the rAs statistical method the final matrix were calibrated. In this regard, it is important to note that the disaggregation structure between imported and domestic use values was obtained by taking the structure of MU of 2005 and 369 sectors at basic prices, and updated it for 2014 with the MU of 2014 and 62 sectors.

It is important to mention that the sectors Bovine meat products (cmt) and Meat products n.e.c. (omt) were kept grouped together because their cost structure, when ungrouped they presents certain unusual relations with other sectors. For this reason, they were left grouped together in the final table under the cmt_omt sector.

Other characteristics of the data sources are:

- Supply and use tables with 61 activities and 369 products.
- Use tables at current prices
- Supply tables at basic prices
- Values of supply and use tables in billions of current pesos.
- Margins by product
- Value added by sector
- Taxes on production and subsidies by sector and by product

Finally, the description of the sectoral disaggregation for Colombia is as follows:

Colombia Description	GTAP Code	GTAP Description
Arroz con cáscara (paddy)	pdr	Paddy rice
Trigo en grano	wht	Wheat
Maíz	gro	Cereal grains nec
Cebada	gro	Cereal grains nec
Sorgo, centeno, avena y otros cereales n.c.p.	gro	Cereal grains nec
Papa	v_f	Vegetables, fruit, nuts
Leguminosas frescas o secas (frijol, garbanzo, habas, lentejas, arvejas, etc.)	v_f	Vegetables, fruit, nuts
Tomate	v_f	Vegetables, fruit, nuts
Legumbres frescas o refrigeradas (cebolla, ajos, remolacha, champiñones, etc.)	v_f	Vegetables, fruit, nuts
Yuca	v_f	Vegetables, fruit, nuts
Otras legumbres, raíces y tubérculos (ñame, arracacha, nabos, cubios, etc.)	v_f	Vegetables, fruit, nuts
Banano	v_f	Vegetables, fruit, nuts
Plátano	v_f	Vegetables, fruit, nuts
Naranja, limón, mandarina y otras cítricas (toronja, tangelo, etc.)	v_f	Vegetables, fruit, nuts
Otras frutas y nueces frescas n.c.p. (uvas, piña, mango, maracuyá, etc.)	v_f	Vegetables, fruit, nuts
Fruto de palma africana	osd	Oil seeds
Soya	osd	Oil seeds
Otras semillas y frutos oleaginosos n.c.p. (semilla de algodón, maní, ajonjolí, girasol, cártamo, copra, colza y mostaza)	osd	Oil seeds

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Colombia Description	GTAP Code	GTAP Description
Caña de azúcar	c.b	Sugar cane, sugar beet
Algodón desmotado	pfb	Plant-based fibers
Fique, paja y otras materias vegetales en bruto (yute, lino, cáñamo, etc.)	pfb	Plant-based fibers
Café pergamino	ocr	Crops nec
Cafetos	ocr	Crops nec
Rosas	ocr	Crops nec
Claveles	ocr	Crops nec
Pompones, orquídeas y otras flores y capullos cortados	ocr	Crops nec
Plantas vivas, semillas de flores, de frutos y de vegetales n.c.p.	ocr	Crops nec
Cacao en grano	ocr	Crops nec
Otras plantas bebestibles (té, mate, etc.) y especias elaboradas o sin elaborar (cominos, clavos, etc.)	ocr	Crops nec
Productos de tabaco sin elaborar (tabaco negro y rubio)	ocr	Crops nec
Hoja de coca	ocr	Crops nec
Amapola y marihuana	ocr	Crops nec
Otras materias vegetales en bruto utilizadas en perfumería, químicos, etc.	ocr	Crops nec
Plantaciones de palma de aceite	ocr	Crops nec
Plantaciones de caña de azúcar	ocr	Crops nec
Plantaciones de árboles frutales, plátano y banano; praderas mejoradas y otros n.c.p.	ocr	Crops nec
Fumigación aérea	obs	Business services nec
Desmote de algodón	ocr	Crops nec
Otros servicios relacionados con la producción agrícola	ocr	Crops nec
Trilla realizada por cuenta de terceros	ocr	Crops nec
Café trillado o verde	ocr	Crops nec
Ganado bovino	ctl	Bovine cattle, sheep and goats, horses
Aves de corral	oap	Animal products nec
Huevos con cáscara frescos, en conserva o cocidos, o embrionados	oap	Animal products nec
Ganado porcino	oap	Animal products nec
Ganado ovino, caprino, equino, asnal, mular, etc.	oap	Animal products nec
Otros animales de criadero y capturados; otros subproductos de origen animal comestibles o no	oap	Animal products nec
Veterinaria y servicios relacionados con la cría de animales	oap	Animal products nec
Leche sin elaborar	rmk	Raw milk
Fibras textiles naturales preparadas para el hilado (seda, lana, pelo y algodón cardados o peinados, yute y otras)	wol	Wool, silk-worm cocoons
Productos de silvicultura, extracción de madera y actividades conexas	frs	Forestry

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Colombia Description	GTAP Code	GTAP Description
Productos de la pesca, la acuicultura y servicios relacionados	fsh	Fishing
Carbón mineral	coa	Coal
Petróleo crudo	oil	Oil
Servicios relacionados con la extracción del petróleo y el gas natural, excepto los de prospección	oil	Oil
Gas natural y otros energéticos (uranio y torio)	gas	Gas
Minerales metálicos	oxt	Other Extraction (formerly omn Minerals nec)
Minerales no metálicos	oxt	Other Extraction (formerly omn Minerals nec)
Carne de ganado bovino, ovino caprino y otros, fresca, refrigerada o congelada	cmt	Bovine meat products
Carne de ganado porcino fresca, refrigerada o congelada	omt	Meat products nec
Aceites y grasas vegetales.	vol	Vegetable oils and fats
Productos lácteos	mil	Dairy products
Arroz, blanqueado, pulido, semielaborado o elaborado	pcr	Processed rice
Azúcar y panela	sgr	Sugar
Productos alimenticios n.c.p.	ofd	Food products nec
Productos de café y trilla	ofd	Food products nec
Bebidas	b_t	Beverages and tobacco products
Productos de tabaco	b_t	Beverages and tobacco products
Textiles	tex	Textiles
Prendas de vestir	wap	Wearing apparel
Productos de Cuero y servicios relacionados	lea	Leather products
Productos de madera, corcho, paja y materiales trenzables	lum	Wood products
Productos de papel, cartón y sus productos	ppp	Paper products, publishing
Edición, impresión y artículos análogos	ppp	Paper products, publishing
Productos de la refinación del petróleo; combustible nuclear	p_c	Petroleum, coal products
Sustancias y productos químicos	chm	Chemical products
Productos farmacéuticos básicos	bph	Basic pharmaceutical products
Productos de plástico y caucho	rpp	Rubber and plastic products
Productos minerales no metálicos	nmm	Mineral products nec
Metales ferrosos	i_s	Ferrous metals
Metales n.c.p.	nfm	Metals nec
Productos metálicos	fmp	Metal products
Otra maquinaria y suministro eléctrico	ele	Computer, electronic and optical products
Equipo eléctrico	eeq	Electrical equipment
Maquinaria y equipo	ome	Machinery and equipment nec
Vehículos de motor y partes	mvh	Motor vehicles and parts
Equipo de transporte n.c.p.	otn	Transport equipment nec
Muebles	omf	Manufactures nec
Otros bienes manufacturados n.c.p.	omf	Manufactures nec
Energía eléctrica	ely	Electricity
Gas domiciliario	gdt	Gas manufacture, distribution
Agua	wtr	Water
Construcción	cns	Construction
Obras civiles	cns	Construction

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Colombia Description	GTAP Code	GTAP Description
Comercio	trd	Trade
Servicio de reparacion de vehiculos y motocicletas	trd	Trade
Servicios de alojamiento, suministro de comidas y bebidas	afs	Accommodation, Food and service activities
Servicios de transporte terrestre	otp	Transport nec
Servicios de transporte por vía acuática	wtp	Water transport
Servicios de transporte por vía aérea	atp	Air transport
Servicios complementarios y auxiliares al transporte	whs	Warehousing and support activities
Servicios de correos y telecomunicaciones	cmn	Communication
Servicios de intermediación financiera, de seguros y servicios conexos	ofi	Financial services nec
Seguros	ins	Insurance (formerly isr)
Servicios inmobiliarios y de alquiler de vivienda	rsa	Real estate activities
Servicios a las empresas excepto servicios financieros e inmobiliarios	obs	Business services nec
Servicios de asociaciones y esparcimiento, culturales, deportivos y otros servicios de mercado	ros	Recreational and other services
Servicios domésticos	ros	Recreational and other services
Administración pública y defensa	osg	Public Administration and defense
Servicios de enseñanza de mercado y no mercado	edu	Education
Servicios sociales y de salud de mercado	hht	Human health and social work activities
Servicios de alcantarillado y eliminación de desperdicios, saneamiento y otros servicios de protección del medio ambiente	hht	Human health and social work activities
Servicios de asociaciones y esparcimiento, culturales, deportivos y otros servicios de no mercado	hht	Human health and social work activities
Servicios de alquiler de bienes raíces residenciales prestados por cuenta propia	dwe	Dwellings

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