

Colombia

Alvaro Andrés Perdomo Strauch

1. Introduction

Colombia has a long tradition building and working with input-output tables and social accounting matrixes, in the country is recognized the importance of this kind of information¹. Likewise, in the last years we have been more interested in GTAP team work because at the moment we are managing and improving some CGE models and one of them is a multicountry model².

The input-output table for Colombia in GTAP v6 was built according to the information supplied by the Colombian National Statistical Office (DANE)³ for 2000⁴. The DANE has four kinds of tables where the National Accounts are compiled: (i) a use matrix (industry by commodity), (ii) a make matrix (industry by commodity), (iii) a supply-demand table (by commodity) and (iv) a general economic equilibrium table.

The use and the make matrices have 59 sectors and they are valued at purchaser prices, while the supply-demand table is available for 480 sectors and it is valued at purchaser, producer and basic prices. The general equilibrium table involved the aggregate values for the main institutional agents that interact in the economy (households, enterprises, government and rest of the world).

All values in the last tables and matrixes are expressed in million 2000 current Colombian pesos. The average exchange for that year was 2,087.4 pesos per US dollar.

2. Mapping Procedure

A mapping between the DANE sectors and the GTAP Sectoral Classification (GSC2) was done by using concordances between the last ones with the International Standard Industrial Classification revision 4 (ISICr4) and the Central Product Classification (CPC).

¹ See Cordi (1987, 1988), Perdomo (2004), and Valderrama and Gutiérrez (1996).

² The main characteristics of this model are explained in Light and Rutherford (2003).

³ Departamento Administrativo Nacional de Estadística

⁴ The structure of GTAP v6 is almost the same that the structure of GTAP v5 that was built by Ramiro Guerrero.

All GSC2 sectors correspond to at least one of the 480 sectors considered in the supply-demand table. The concordance table reports all the aggregations that had to be done in order to build GTAP v6⁵.

Most of the splits in the Colombian input-output table (that correspond to the sectors in the Colombian use and make matrices) had to be done in the agriculture sector. However, no supply-demand sector had to be split.

3. *Additional Comments*

The general economic equilibrium table and the use and make matrices were used to build a Social Accounting Matrix (SAM) which includes an input-output matrix (commodity by commodity); it was done using the commodity technology assumption. The input-output matrix has 59 sectors.

The SAM was converted in the GTAP tables according to: (i) the information included in the supply-demand table (supply and demand structure) and (ii) the concordance table.

The Colombian input-output matrix reports imports by commodity. In order to execute GTAP requirements, we had to create an imports matrix by pro-rating the totals across uses by applying the structure implied by the total use matrix (Huff, McDougall and Walmsley 2000). It was allocated across all uses (except exports) according to the use coefficients of the corresponding commodity (row shares). This was done after aggregating from 59 to 57 sectors.

Indirect taxes and import duties were allocated based on the supply-demand table, wherein indirect taxes are divided across uses (intermediate consumption, final consumption, exports, investment, and change in stocks).

Land payments are not specified. However, according to the national accounts, total land payments amounted to \$ 2,223,209 million current Colombian pesos in 2000.

⁵ In the file Colombia_3.xls you can find the concordance table and the other tables that you need for GTAP v6.

References

- Cordi, Angela. 1987. "La Matriz de Contabilidad Social: Aplicación al Caso Colombiano en 1980", Mimeo. Departamento Nacional de Planeación, 51 p.
- Cordi, Angela. 1988. "La Matriz de Contabilidad Social: Deducción de los Multiplicadores de Contabilidad y su Aplicación al Caso Colombiano en 1985". *Planeación & Desarrollo*. Departamento Nacional de Planeación, Vol. 20, No. 1 and 2, Colombia. (January-June 1988); p 79-119.
- Huff, Karen; McDougall, Robert and Walmsley, Terrie. 2000. "Contributing Input-Output Tables to the GTAP Data Base". *GTAP Technical Paper*. No. 1, Release 4.2. (January 2000); p26.
- Light, Miles and Rutherford, Thomas. 2003. "Free Trade Area of the Americas: An Impact Assessment for Colombia". *Archivos de Economía*. Departamento Nacional de Planeación, No. 222 Colombia. (April 2003); p31.
- Perdomo, Alvaro. 2004. "Modelo Insumo-producto Dinámico", *Archivos de Economía*, Departamento Nacional de Planeación (forthcoming 2004), p35.
- Valderrama, Fanny and Gutierrez, Javier. 1996. "Multiplicadores de Contabilidad Derivados de la Matriz de Contabilidad Social". *Archivos de Economía*. Departamento Nacional de Planeación, No. 41 Colombia. (January 1996); p 251-304.