

Nigeria

Mark Horridge

Nigeria is one of the largest (by population or dollars) African countries not hitherto separated in the GTAP dataset. Moreover, its large oil revenues distinguish it from the other Sub-Saharan African countries with which it has been grouped. Hence, breaking out Nigeria enhances our ability to estimate the effects of trade policies on other African countries.

The source for Nigerian data was the official 1990 Input-Output Table (30 sector), and an un-official 1999 Input-Output Table (18 sector), both supplied by Patrick Osakwe, of the Trade and Regional Integration Division, UN Economic Commission for Africa (UNECA). Conversion of I-O data to GTAP format was performed by Mark Horridge and funded by UNECA through the African Trade Policy Centre.

The 18 sectors of the 1999 table were:

Agriculture, Livestock, Forestry, Fishing, Crude Petroleum, Other Mining, Manufacturing, Other Manuf, Utilities, Bldg&Constructn, Transport, Communications, Distributive Trade, Hotel And Restrnts, Fin.&Insurance, Real Estate&Bus.Serv, Housing (Dwelling), and Community Soc.&Pers Serv.

We altered several implausible features of the 1999 table:

It showed large sales of Livestock to investment (herd building?), causing alarm at Purdue. We allocated 70% of these sales to household consumption. Surprisingly large sales of

The 1999 table suggested that government purchases of Manufacturing were as large as household purchase. We judged this implausible (it was not true in 1990). We re-allocated half of these purchases to household consumption.

There were large sales of crude oil to households. We rerouted 80% of these through the Refinery sector.

These were the only changes to the 1999 table -- which we otherwise treated as a control.

The 1990 table needed more extensive revision. Large sales of food and drink to investment (possibly the "investment" column included a statistical discrepancy?) were re-allocated to households. In 1990 most Fishing was sold direct to households, while in 1999, most Fish was processed before consumption. We adjusted the 1990 table to suit the 1999 treatment. Unnaturally large government purchases of food and drink, shoes and cloth were also reduced.

It should be emphasised that the (heavily-revised) 1990 numbers were only used to bring additional manufacturing sectoral detail to the 1999 data. Using proportions from the more detailed 1990 table, we split the 1999 manufacturing numbers into the following sectors:

Food, BevTobacco, Textiles, FootLeathr, Wood, Paper, DrugsChem, Refineries, RubberPlst, IronSteel, FabricMtal, VehicleAsm, OtherManuf.

For contributed I-O tables GTAP requires that Coal (col) be distinguished separately. IEA energy balance data (via Terrie Walmsley) indicated that Nigeria produced or imported very little coal. According we created a minute dummy Coal sector for Nigeria.

This gave rise to the 29 sectors listed below, together with corresponding GTAP sectors.

Table 1.

| | I-O sectors | GTAP sectors |
|----|-------------|---------------------------------|
| 1 | Coal | col |
| 2 | Agricultre | pdr wht gro v_f osd c_b pfb ocr |
| 3 | Livestock | ctl oap rmk wol |
| 4 | Fishing | fsh |
| 5 | Forestry | for |
| 6 | CrudePetrl | oil gas |
| 7 | OthMining | omn |
| 8 | Food | cmt omt vol mil pcr sgr ofd |
| 9 | BevTobacco | b_t |
| 10 | Textiles | tex wap |
| 11 | FootLeathr | lea |
| 12 | Wood | lum |
| 13 | Paper | ppp |
| 14 | Refineries | p_c |
| 15 | Chemicals | crp |
| 16 | IronSteel | i_s |
| 17 | FabricMtal | fmp |
| 18 | VehicleAsm | mvh |
| 19 | OtherManuf | nmm nfm otn ele ome omf |
| 20 | Utilities | ely gdt wtr |
| 21 | BldgConst | cns |
| 22 | Transport | otp wtp atp |
| 23 | Communic | cmn |
| 24 | TradeCafe | trd |
| 25 | FinanceIns | ofi isr |
| 26 | RealEstBsS | obs |
| 27 | Dwelling | dwe |
| 28 | CtySocPrSv | ros |
| 29 | GovtServc | Osg |

Production and commodity taxes were distinguished but no separate tariff data was supplied.

The original 1999 data was uniformly scaled so that Nigerian GDP matched the Purdue estimate (in million \$US).

NIGERIA; INTERINDUSTRY FLOW MATRIX FOR 1990 30 sector
 UPDATED 1999 INPUT OUTPUT TABLE OF THE NIGERIAN ECONOMY