



United Nations
Economic Commission for Africa



Global Trade Analysis Project

Experience on data compilation for GTAP Data Base — focus on Cameroon

From National Accounts detailed SUT to GTAP IOT Format

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- National input-output tables (IOT) are a core piece of the GTAP Data Base
- Individual representation of countries in the GTAP Data Base grew over time
- Especially for African, in recent years, thank to the GTAP Africa projects
- Two contributions of Cameroon's IOT:
 - 1st in GTAP 8 with data for 2003
 - 2nd in GTAP 11 with data for 2017
- Contributed tables are more often based on aggregated SUT/IOT or SAM
- Continuous improvement approach (aka quality):
 - “if you don't like it, help fix it!” (GTAP Data Base operational concept)
- Aim to update and improve the quality of Cameroon's data in GTAP Data Base
- Use of detailed national accounts (NA) database for 2019

- Detailed 2019 NA compilation database from the National Institute of Statistics, compiled using the ERETES software tool
- Include detailed supply and uses tables (SUT) data compliant with the 2008 SNA SUT framework
- **Resources** at basic price:
 - Production matrix by industry and product
 - Imports by product
- **Uses** at purchaser's price and basic price:
 - Intermediate consumption by industry and product (only by product at basic price)
 - Final consumption, Capital formation and Exports by product
- **Valuation components :**
 - Includes taxes on product, trade margins and transport margins
 - by product, in the supply side
 - by product and type of uses, in the use side
- **Gross value added components** by industry:
 - Compensation of employees (labor)
 - Gross operating surplus (capital)
 - Other taxes less subsidies on production

- From detailed SUT to IOT:
 - Determining intermediate consumption matrix at basic price
 - Splitting uses and valuation components between domestic and imports parts
 - Transforming the input uses matrix (product-by-industry) into a product-by-product matrix:
 - use of “industry technology” assumption (model B, Eurostat (2008) and UN (2018))
- Mapping national product classification (232) to GTAP sectors (65):
 - resulted in 60 distinct GTAP compliant sectors
- Aggregation of the detailed IOT (national classification) into GTAP format

Challenges and Solutions

- Trial and error process
- Some IOT required data are missing in the SUT framework: e.g.: domestic / imports split of uses
- No distinct position for GTAP sector dwellings (dwe) in the national product and industry classifications
- Use of R script for reproducibility and consistency checks, and literature review
- Use of assumptions: proportional allocation, with consistency constraints
- Use of related data in the detailed database to split real estate industry and products between own-account dwelling services and other real estates

Concluding Remarks

- Improved Cameroon's IOT in GTAP format for future release:
 - improved consistency with disseminated national accounts statistics
 - improved coverage of distinct GTAP sectors (60)
- Regular compilation of IOT (every year)
- Potentially replicable in other countries, especially for countries that use the ERETES software tool
- Strengthen the collaboration with NSOs to improve the quality and coverage of contributed country IOTs



Thank You!!!

Questions / Comments?



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