African Growth and Development Policy (AGRODEP) Modeling Consortium

Training Course on Building and Updating a Social Accounting Matrix

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3. Disaggregating the Factors and Households Accounts (Sessions 3 & 4)

3. Disaggregating the Factors and Households Accounts

Supply and Use Table (SUT)	**= Supply of Products** • Domestic supply of Products (Basic Price) • Imports of Products (CIF Price) • Indirect Taxes (VAT, Tariff, Sale tax, Excise taxes, etc.) • Trade Margins

Supply and Use Table (SUT) Expenditure Survey	= Use of Products • Final Consumption o Disaggregation among representative categories of households • Exports of products • Intermediate Consumption • Gross Fixe Capital Formation • Changes in Inventories

3. Disaggregating the Factors and Households Accounts

Supply and Use Table (SUT)
Income or Labor Force Survey

= Value Added
- Payments of Salary and Wage Workers
- Gross Operating Surplus (GOS) and Mixed Income (MI)
  - Sectoral Disaggregation of GOS and MI between GOS and MI
  - Sectoral Disaggregation of MI between Self-employed Workers and Owned Capital
  - Breakdown of Salary/Wage and Self-employed Workers

Integrated Economic Accounts
- *Government Budget and Public Account*
- *Balance of Payment*

Income and Expenditure Survey

= Income Distribution
- Salaries and Wages
- GOS and MI
  - Distribution of Primary Income (Labor and capital) among Institutional Sectors
  - Secondary Distribution of Income

3. Disaggregating the Factors and Households Accounts

1. Survey Data Handling

Estimation of Self-employed Labor Cost (Individual-level)

Adjustment of the Net Activity Revenue (Household-level)

Aggregation of Activities Revenues and Factor Costs

Consumption Expenditure Data

Inter-institutional Transfers Data

2. Disaggregating the SAMs' Factors & Households Accounts

Activities GOS and MI

Activities Mixed Income

Salary and Wage Payments

Factors Revenues

Consumption Expenditures

Transfers Revenues and Expenses

1. Survey Data Handling

Estimation of Self-employed Labor Cost (Individual-level)

Identify salary and wage workers, and self-employed workers

Compute the number of working hours/days separately for salary/wage and self-employed workers

Compute individual salary/wage rates, if not available (currency per hour/day)

Estimate self-employed implicit wage rates using an econometric method (Mincer or Heckman)

Compare real and implicit wage rates (use a graph)

Define and identify the criteria of breaking down workers into categories (e.g. urban vs. rural, literate vs. illiterate)

The estimation of the owned factor cost can be extended to agriculture land, cattle, and other types of capital, whenever data are available.

1. Survey Data Handling

Adjustment of the Net Activity Revenue (Household-level)

Compute the net activity revenue = Gross activity revenue – direct input and salary/wage payments

Aggregate salaries and wages, and self-employed labor cost at household-level; in case, other factors are considered, aggregate them and compute the production cost (self-employed labor, owned land, owned cattle, etc.)

Compare the net activity revenue and the labor cost or production cost (use a graph)

If needed, adjust the net activity revenues upward and uniformly to eliminate negative operating surplus (net activity revenue - labor/production cost)

1. Survey Data Handling

Aggregation of Activities Revenues and Factor Costs (SAM-level)

Establish a mapping of activities/industries between the SUT/SAM and the household survey

Define criteria to categorize households by representative categories (e.g. quintile categories of consumption expenditures both in urban and rural areas)

Aggregate the net activity revenue, the adjusted net activity revenue, and the factor costs (labor, land, Cattle, etc.) by activity/industry (see table 1), then by representative household category (see table 2)

3. Disaggregating the Factors and Households Accounts

1. Survey Data Handling

Table 1: Activity Revenues and Factor Costs by Economic Activity

SUT/SAM Activity	Net Activity Revenue	Adjusted Net Activity Revenue	Self-Employed Labor Categories	Capital Revenue	Salary and Wage Labor Categories
Activity 1					
Activity 2					
…					
Activity j					
…					
Activity n					
All					
SAM Mixed Income					

1. Survey Data Handling

Table 2: Activity and Factor Revenues by Representative Household Category

Category	Net activity revenue	Adjusted net activity revenue	Self-Employed Labor Categories	Capital	Salary and Wage Labor
Household 1					
Household 2					
…					
Household h					
…					
Household n					
All Household					
SUT/SAM Mixed Income					

1. Survey Data Handling

Consumption Expenditure

Establish a mapping of commodity categories between the SUT/SAM and the household survey

Aggregate the survey's consumption expenses by SUT/SAM commodity categories and representative households categories

1. Survey Data Handling

Table 3: **Commodity Expenses of Representative Household Category**

Category	Household Category 1	Household Category 2	...	Household Category h	...	Household Category m	**All**
Commodity 1							
Commodity 2							
...							
Commodity i							
...							
Commodity n							
All Commodities							

1. Survey Data Handling

Transfers Revenues and Expenses

Identify survey's transfers revenues and payments at individual and household levels

Aggregate survey's transfers revenues and payments by representative household categories

3. Disaggregating the Factors and Households Accounts

1. Survey Data Handling

Table 4: Transfer Revenues and Payments by Representation Household Category

Transfer category	Household Category 1	Household Category 2	…	Household Category h	…	Household Category m	All Households
Revenue 1							
Revenue 2							
…							
Revenue r							
…							
Revenue n							
All Revenues							
Payment 1							
Payment 2							
…							
Payment p							
…							
Payment m							
All Payments							

2. Disaggregating the Factors and Households Accounts

Disaggregate the SAM's Activities Gross Operating Surplus and Mixed Income

Compute activity shares of the adjusted net activity using information from table 1

Distribute the SAM's mixed income across sectors using the survey shares

Compute the SAM's activity gross operating surplus by subtracting the estimated mixed income

In case the SAM's gross operating surplus is negative for an activity, use the SAM value and adjust the other activities mixed income accordingly

2. Disaggregating the Factors and Households Accounts

Disaggregating the SAM's Activities Mixed Income

Compute factor shares (self-employed labor, owned land, owned cattle, operating surplus/other capital) by activities

Disaggregate the estimated mixed income across factors

Disaggregating the SAM's Salary and Wage Payment

Compute the salary and wage shares by activities using information from Table 1

Disaggregate across factors the salary and wage payments of the SAM industries

2. Disaggregating the Factors and Households Accounts

Factors Revenues

Compute the shares of adjusted activities net revenue across household groups using information from Table 2

Use the above shares to disaggregate the SAM's mixed income across household groups

Compute the shares of owned factor revenues for various representative household groups

Use the above shares to disaggregate households' mixed income into self-employed labor and owned capital

Compute the shares of salary and wage across household groups

Use the above shares to disaggregate the SAM salaries and wage revenues across household groups

2. Disaggregating the Factors and Households Accounts

Use the above shares to disaggregate the SAM salaries and wage revenues across household groups

Consumption Expenditures

Compute commodities budget shares for various representative household groups

Use the above shares to disaggregate households' consumption expenses of the SAM

Transfers Revenues and Expenses

Mapping of the SAM and the Survey transfers

Compute shares for various representative household groups

Use the above shares to disaggregate households' transfer revenues and payments of the SAM

Updating a Social Accounting Matrix (Session 5)