



Theory of Social Accounting

Part 3



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Introduction

- *An Introduction to Social Accounting Matrices*
- *Structure of a SAM*
- *Macro-SAM and National Accounts Matrix*
- *The Production Boundary and Price System*
- **Interpreting the Information in a Social Accounting Matrix**
 - A Macro SAM for Botswana
 - Suggested guide to aid SAM interpretation
- *Inter-Industry Tables and SAMs*
- *Satellite accounts*



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Interpreting a SAM

1. **Before** looking at the SAM learn about the economy.
2. Check that the SAM has an appropriate set of accounts.
3. Check that there are the same number of rows and columns.
4. Check that the row totals and the column totals are identical.
5. Compute the column coefficients.
 - The column coefficients are cost shares
 - Identical sets of column coefficients – two identical/homogenous commodities
 - Sub-components
 - Intermediate Input Use (additional column coefficient matrices)
 - Factor Use by activity (additional column coefficient matrix)
 - Households
 - Exports
6. Compute the row coefficients
 - The patterns of tax revenue/household incomes/Imports


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Example


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Macro SAM (Botswana)

	Commodities	Activities	Factors	Transfers	Households	Other Institutions	Taxes on Products	Taxes on Production	Subsidies	Taxes on Income	Govem't	Capital	Rest of World
Commodities	-717.0	5,660.0	0.0	0.0	3,599.0	151.0	0.0	0.0	0.0	0.0	2,596.0	2,545.0	4,083.0
Activities	13,922.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Factors	0.0	8,291.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Transfers	0.0	0.0	0.0	0.0	170.0	4,649.0	0.0	0.0	0.0	0.0	1,067.0	0.0	626.0
Households	0.0	0.0	3,583.0	272.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	170.0
Other Institutions	0.0	0.0	4,183.0	3,070.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,010.0
Taxes on Products	1,087.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Taxes on Production	0.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subsidies	0.0	-44.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Taxes on Income	0.0	0.0	0.0	0.0	94.0	1,263.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Government	0.0	0.0	525.0	2,528.0	0.0	0.0	1,087.0	15.0	-44.0	1,356.0	0.0	0.0	0.0
Capital	0.0	0.0	0.0	0.0	105.0	1,190.0	0.0	0.0	0.0	0.0	1,731.0	856.0	-481.0
Rest of World	3,625.0	0.0	0.0	641.0	57.0	1,012.0	0.0	0.0	0.0	0.0	73.0	0.0	2,322.0
Total	19,351.0	13,922.0	8,291.0	6,512.0	4,025.0	8,263.0	1,087.0	15.0	-44.0	1,356.0	5,467.0	3,402.0	7,729.0



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Commodity Accounts

- Supply of commodities is made up of
 - imports (*cif*) (18.7%), domestic production (71.9%)
 - domestic trade and transport margins (3.7%)
 - taxes on commodities (5.6%)
 - import duties vv other commodity taxes
- Commodity demand
 - intermediate inputs (29%), domestic trade and transport margins (4%)
 - export demand (21%)
 - household demand (19%), government demand (13%), investment (13%), other institutions (<1%).
- Openness
 - 30% of domestic production exported and 20% of supply imported



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 ***Activities, Factors & Households Accounts***

- Production structure (expenditures)
 - intermediates (40%)
 - factors (primary inputs) (59%)
- Factor Accounts (expenditures)
 - **other institutions (50%)**
 - government (6%)
 - households (43%)
- Household Accounts (incomes)
 - factor sales (89%)
 - transfers (7%)
 - rest of the world (4%)

Remittances by migrant workers in South Africa were historically important

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 ***Other Accounts***

- Other institutions
 - factor services (50%)
 - rest of the world (12%) (earnings on foreign investments)
 - transfers (37%) (intra institutional transfers)
- Transfers (incomes)
 - Other institutions (71%)
 - government (16%)
 - the rest of the world (9%)
 - households (3%)
- Transfers account (expenditures)
 - Government (46%)
 - other institutions (37%)
 - rest of the world (8%)
 - households (7%)

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Guidance



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Learn about the Economy

- Before looking at the SAM learn about the economy.
 - Are there any structural features about the economy that should be reflected in the SAM, e.g., natural resource exports, income distribution, role of government, etc?
 - Are there accounts that should appear in the SAM, given the structural features of the economy?
 - What are the values of the macroeconomic indicators for the year of the SAM? (Look these up at the economy’s statistical agency or the World Bank database.)
 - Was the year for the SAM a typical year, e.g., was there a drought, was there an oil price spike?



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Account Details

- Check that the SAM has an appropriate set of accounts.
 - Does the account structure reflect the structure of the economy?
 - Is there sufficient detail in the factor accounts to provide detail about sources of household incomes?
- Check that there are the same number of rows and columns.
 - A non-square is wrong.
 - Check the row and column labels are matched
 - Check for non reporting of zero values (row/column with mix of positive and negative values)
- Check that the row totals and the column totals are identical.
 - If the row and column total are not identical the SAM is INCONSISTENT
 - Check the precision at which entries are reported
 - Use the computed totals to identify transaction errors
 - With widespread errors check information content before resolving the errors.


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Compute the column coefficients

- The column coefficients are cost shares and are most important determinants
 - Column coefficients for some sub matrices may be needed to ‘unmask’ odd entries.
- If the column coefficients are the same, accounts should be aggregated.
 - Activities: two, or more, activities are producing an identical output;
 - Factors (expenditures): two, or more, institutions have identical patterns of factor ownership;
 - Households: two, or more, households have identical preferences.
- Intermediate Input Use (additional column coefficient matrices)
 - Check for logically inconsistent entries, e.g., energy activities not using fossil fuels, etc.
- Factor Use by activity (additional column coefficient matrix)
 - are the factor costs logically consistent?
- Households
 - Are savings and direct tax rates logical
- Exports
 - Are the patterns of exports consistent with expectations


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Compute the row coefficients

- Tax revenues
 - Are the patterns of tax revenue to the government consistent with expectations?
- Household incomes
 - Are the patterns of household incomes consistent with expectations?
- Imports
 - Are the patterns of imports consistent with expectations?


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Theory of Social Accounting Part 3

The End


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