



An Introduction to National Account Matrices



Intro to NAMs, 2026 © cgemod 1

1



Outline

- Introduction
 - What is a NAM?
 - Why use a NAM?
 - Structure of a NAM?
- An Aggregate NAM
 - A NAM to aid SAM development
- A ‘Full’ NAM
 - A NAM to provide important control totals
- Process



Intro to NAMs, 2026 © cgemod 2

2





Introduction



Intro to macro-SAMs, 2026 © cgemod 3

3



What is a NAM?

- National Accounts in Matrix format
 - Double-entry bookkeeping
 - Single-entry bookkeeping
- Rendering SNA formatted data in matrix format
 - Production: Commodities & Activities
 - Generation of Income
 - Allocation of Primary Income
 - Secondary Distribution of Income
 - Use of Disposable Income
 - Capital and Investment
 - Financial
 - Rest of the World



Intro to NAMs, 2026 © cgemod 4

4



An Aggregate NAM



Intro to NAMs, 2026 © cgemod 7

7



Aggregate NAM

- Plan A: simple macro totals (one per cell)
- Plan B: plan A plus some extra detail
 - Institutions in Use of Disposable Income Acc
 - Aggregate taxes
 - Net Production taxes
 - Net Commodity/Product taxes
 - Net Direct taxes
 - Options for consumption of fixed capital
 - Stock changes



Intro to NAMs, 2026 © cgemod 8

8



Aggregate NAM Template

Aggregate National Accounts Matrix
NOTE: Use of lower cases

Country and Year
Date Input:

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
		Generation of Income				Allocation of Primary Income		Secondary Distribution				Use of Disposable Income				Capital		Investment		Rest of World				
		Consumption	Activities	Factor Payments	Net Taxes Paid/Produced	Net Taxes	Activities: Consumption	Institutional	Direct Taxes	Social Contributions	Current Transfer	Household	MPER	Non-Financial Corporate	Financial Corporate	Government	Net Income of Financial Corp.	Net Income of Govt.	Stock Changes	Fixed Capital Formation	Financial	RoW - Current	RoW - Capital	Total
1	Consumption	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	Activities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3	Factor payments	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4	Net Taxes - Production	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5	Allocation of Primary Income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6	Net Taxes - Consumption	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7	Activities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8	Direct Taxes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9	Social Contributions	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	Current Transfer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	Household	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12	MPER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13	Non-Financial Corporate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14	Financial Corporate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15	Government	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16	Capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17	Savings (RoW or Govt)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18	Conservation of Fixed Cap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
19	Stock Changes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
20	Direct Fixed Capital Form	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
21	Financial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
22	RoW - Current	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
23	RoW - Capital	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
24	Total																							



Intro to NAMs, 2026 © cgemod 9

9



A 'Full' NAM



Intro to NAMs, 2026 © cgemod 10

10



Control Totals

What is a Control Total?
An estimate of the sum of the transactions in a sub-matrix of dimensions $n*m$, where n & m are ≥ 1

Why use Control Totals?
Some TVs may be known (with error)
Some aggregates may be targets (with error),
e.g., C, G, I, X, M
Consistency conditions

Role of Control Totals
Used in estimation and reconciliation metrics 

Intro to NAMs, 2026 © cgemod 13

13



Control Totals

- The lessons for developing control totals for SAM estimation are
 - more control totals are better than fewer,
 - estimates of the standard errors for priors and control totals are important,
 - estimates of standard errors may need to be subjective, and
 - the accuracy of an estimated SAM, as a reflection of economic transactions, depends strongly on the information in the prior estimates.

A NAM provides a series of control totals for aggregate TVs 

Intro to NAMs, 2026 © cgemod 14

14



Process



Intro to NAMs, 2026 © cgemod 15

15



Process

Learning by doing

and by mistakes!!!

Use the NAM guidelines



Intro to NAMs, 2026 © cgemod 16

16



 **Process**

Use the Templates

- Collect published national accounts data
 - Start with *C, G, I, X & M*
 - Then
 - factor payments
 - Taxes on products & production
 - Total incomes & expenditures by institutions
 - Trade accounts for current account TVs
 - What is left?

Data points are usually missing 

Intro to NAMs, 2026 © cgemod 17

17

 **Process**

All data points are measured with error

For each data point evaluate error bounds

With statistical evidence record standard errors and distribution

In the absence of statistical evidence assign 'subjective' bounds, e.g., 'score' 1 to 6

RECORD THE INFORMATION 

Intro to NAMs, 2026 © cgemod 18

18



*An Introduction to National
Account Matrices*

The End



Intro to NAMs, 2026 © cgemod 19

19