SAM & Gender: The Case of 2003 SAM for Kenya:

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What is a SAM?

- A matrix of interaction btn production, income, consumption and capital accumulation
- Snapshot of an economy (economic structure).
- Consistent framework of economic processes - details linkages; for analyzing income and expenditure flows in the economy.

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- **Need for consistent multisectoral data for supporting policy analysis & economy wide modelling.**
- **Interactions within a SAM enable policy simulations – impact analysis, mainly growth, income distribution, employment and poverty.**
- **Principle of double entry – expenditures in columns and incomes in rows – incoming in one account must be outgoing in another!**

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- **For each sector: Total income (row) = Total Expenditure (column)**
- **SAM embodies national accounts (macro)—disaggregation (meso)**
- **I-O is a sub-set of SAM – commodity & activity a/cs only => generated from a supply and use table.**

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- **Basic I-O equation: Output + imports (total supply) = Intermediate consumption + Exports + GFCF + Final consumption + change in inventories (total use)**
- **SAM as a basis for simple modelling thro' multiplier analysis (MA)**

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- **I-O multipliers => direct & indirect effects of a change in exogenous demand—don't capture induced effects on factors of production & hh incomes & activity outputs due to income expenditure multipliers**
- **MA reflect the strength of linkages among different sectors of the economy—**indirect as well as direct causal linkages

Assumptions

- Dd driven (excess capacity)
- Constant price relatives
- Constant returns to scale
- Constant market shares.
- Exogenously determined final dd
- Perfect complementarity betwn factors
- Homogenous products within sectors but heterogeneous factors
- Homogenous technology

Standard accounts

- Production a/c (activities & commodities)
- Factors of production (land, labour, capital)
- Institutions (households & enterprises)
- Government
- Capital account(saving-investment)
- ROW

➢ Production--VA--income distr'(institutions)--household groups

Social Accounting Matrix structure

	Production and Product Markets	Income Distribution	Demand Patterns	Financial Sector	Rest of the World
Production and Product Markets			Consumption	Investment	Exports
Income Distribution	Value Added				
Demand Patterns		Disposable Incomes			
Financial Sector			Saving		
Rest of the World	Imports				

Table A.1: *A Sample Social Accounting Matrix*

A Basic SAM Structure

	Activities	Commodities	Factors	Households	Enterprises	Government	Investment	Rest of the World	Total
Activities		marketed outputs		home-consumed outputs					activity income
Commodities	intermediate inputs	transactions costs		private consumption		government consumption	investment,	exports	total demand
Factors	value-added								factor income
Households			factor income to households	Intra-household transfers	surplus to households	transfers to households		transfers to households from RoW	household income
Enterprises			factor income to enterprises			transfers to enterprises		transfers to enterprises from RoW	enterprise income
Government		sales taxes, import tariffs	factor income to government	direct household taxes	surplus to government, enterprise taxes			transfers to government from RoW	government income
Savings				household savings	enterprise savings	government savings	change in stocks	foreign savings	savings
Rest of the World (RoW)		imports			surplus to RoW	government transfers to RoW			Foreign exchange outflow
Total	activity expenditures	total supply	factor expenditures	household expenditures	enterprise expenditures	government expenditures	investment	foreign exchange inflow	

A 2003 SAM for Kenya

- Data sources: national accounts and other macroeconomic databases complemented with survey data.
- Has 6 standard accounts - activities/commodities, factors of production, institutions (enterprises & HH), government, capital account and rest of the world.
- Activities—entities that carry out production
- Commodities—rep mkts for goods & services and non-factor services.
- Distinction between home & marketed consumption

The 2003 Macro SAM

	Activities	Commodities	Factors	Enterprises	Households	Taxes	Govt	Investment	Rest of the World	Total
Activities		1,783,049			95,043					**1,878,092**
Commodities	867,692	117,117			772,972		202,913	196,723	281,387	**2,438,804**
Factors	1,010,400									**1,010,400**
Enterprises			544,860				41,297		4,909	**591,066**
Households			461,261	335,194			17,898		91,014	**905,367**
Taxes		131,756		37,053	33,603					**202,412**
Govt			4,279	7,332	6,298	202,412			5,677	**225,998**
Savings				204,248	-2,548		-36,286	17,498	31,310	**231,719**
Rest of the World		406,882		7,239			176			**414,297**
Total	**1,878,092**	**2,438,804**	**1,010,400**	**591,066**	**905,367**	**202,412**	**225,998**	**231,719**	**414,297**	

Disaggregation

- Used the SAM 2003 to analyse the gendered employment outcomes of various growth options in Kenya—but had to create an employment satellite account

- Disaggregation: production--27 sectors;

- Factors--COE 16 employee categories by gender, region(urban/rural),sector (formal/informal) & skill(skilled/unskilled)

- Institutions-no disaggregation for enterprises but hhs disaggregated according to region and expenditure deciles(lower/upper)

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- Govt—core govt account plus taxes disaggregated into commodity, direct and trade taxes
- No disaggregation for capital (savings-investment) and ROW
- To analyse the employment outcomes in a SAM framework, we constructed an employment satellite account hence interpret multipliers as employment ratios

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- Used NA employment data for aggregates, disaggregated broadly into formal (public and private) and informal, and a further disaggregation of formal employment by sector and gender
- Used respective employment ratios derived from Integrated Household Labourforce Survey 1998/99 to further disaggregate formal employment into labour categories according to gender, region, sector & skill

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- Consider only people earning an income (paid employees) but very small sample—majority of women in unpaid work and hence proportion of women in the sample reduced.
- WMS 1997 used to increase the sample—66% males & 34% females
- Consistency maintained

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- For MA distinguish btn endogenous (production, factors & hhs) & exogenous accounts (e.g. ROW, govt, capital)—Table 3
- MA usually examine nature of multiplier effects of an income injection in one part of system on functional and institutional distribution as well as on incomes of socio-economic groups of hhs
- In the paper, MA also used to analyse the effect on gendered employment outcomes

Simulation Results

- Priority sectors—agriculture, services and manufacturing
- Selected sectors with highest level of linkages in manufacturing and services
- 5 simulations targeting different combinations of sectors: 1) agriculture 2)manufacturing 3) private services 4)agr & manufacturing 5) all three

Results of injections on COE

- Investing in agriculture yields highest increase in incomes (cost of labour)—14.1%
- Intuitive given agriculture is more labour-intensive—services more capital-intensive
- Overall, highest increase registered in informal sector
- Formal sector—private services(61%), manufacturing(50%) & agr(42%)

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- Gender—overall male accounted for over 80% of total increase in COE
  - propn for female higher in the informal sector
  - Results in line with the employment patterns and general socio-economic structure by gender
- Skill—skilled labour benefited most (over 70%)—relatively higher proportion of male are skilled
  - In agrc, unskilled labour accounts for only 14% of the increase

Distr' of wage incomes across households

- Agr yields highest increase in incomes for hhs—26% and services yield lowest (6.2%)
  - Increase benefits rural hhs more than urban (in Kenya agriculture dominantly rural activity)
  - Benefits hhs in upper deciles
- Investing in services & manufacturing benefits urban folks
- Analysis by gender wasn't possible but inferences can be made

Impact on gendered employment creation

- Unlike COE, investing in manufacturing generates highest increase in employment (17% additional jobs vis 14% for agr and 12% services)
  - However, jobs created largely informal sector(86%) —precarious with low earnings
  - Gender-females account for higher propn of growth in informal sector
  - Manufacturing accounts for slightly higher propn of the increase in female employment (33% vis 32% for services
- Skill—highest propn of the increase is for unskilled labour with agriculture taking the lead (71%)
  - Women benefit slightly more from the increase (unskilled labour)

Conclusion

- Formal sector is male dominated
- MA shows investing in priority sectors is bound to benefit men disproportionately more than women both in terms of earnings/incomes and employment opportunities
- Results illustrate disparities in incomes between unskilled and skilled with later benefiting most majority of whom are male

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- Overall, Illustrates how the biased socio-economic structure inhibits equal access/benefit from economic growth potentials
- Need to improve skills for females

- Investing in agriculture has potential of raising rural incomes which benefit majority of women

- Tap the potential of increasing employment opportunities for women in the manufacturing sector

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Reference/details:

Wanjala, B and Were,M. 2009. “Gender Disparities and Economic Growth in Kenya: A Social Accounting Multiplier Approach” in *Feminist Economics* (special issue), pp.1-26—forthcoming