



POLITICAL ECONOMY OF MODELLING AND THE AIAE PROJECT

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Political Economy of Models in Africa

- Modeling face challenges
 - High potential for extinction, esp in developing countries
 - Challenges that affect model building
 - Challenges that affect application of models to policy
- Prospects for models seemed brighter 20 years ago than now
 - Renaissance in the 1980s because of IFIs
 - Failure of SAP
 - Consequent abandonment of planning for development
 - Reliance on implicit (models in the mind), not explicit models
 - Poor culture of model updating
 - Seen more as a waste of time and resources
 - No longer fashionable – Without replacement yet though!
- **Implications – Debates not accompanied by strong empirics**

But...

- Models no longer contrivances of the academia
- Now major tools of policy analysis and decision making
- Most developed countries adopted models when tools were underdeveloped
 - Models have grown to become buoyant framework for policy to rest on
 - And those countries grew with their models
 - And reaped significant benefits over time
- It's not just govt but also private operatives

And...

- From analyzing policy options to forecasting econ aggregates
- Possibilities continue to expand
- Global econ system gets more sophisticated
 - Making simple intuition and calculations obsolete
- Ultimately, there may really be little alternatives to explicit models
- Worry should be about
 - Representation/representability of economies being modelled
 - Ease for policymaker's understanding and work

Is Africa Peculiar? Can it be Modeled?

- Is Africa peculiar? Can it be modelled?
 - Economies devoid of theoretical framework?
 - Do not follow known models?
 - Frameworks for outlining domestic economies based on ‘foreign theories’ and ‘imported models’?
 - Is the continent unmodellable?
 - Do away with unrealistic models and frame policies on ‘realities’?
- Failed by experience?

Constraints are not miniscule

- Difficult to discuss differently because
 - Many model-user institutions themselves build models
 - Model-building and maintenance are resource-intensive
 - Many factors that affect model usage trickle back to model designers
 - Even where they differ from users

Data

- Model is a mini reality; an abstraction
- So model outputs are only as useful as data
 - Relevance and consistency of its assumptions notwithstanding
 - They are merely inputs
 - Most significant inputs into the model is the data
- Essence of modeling is insight, not numbers
- Yet numbers provide basis upon which credibility of insight can be measured
- Numbers are medium for insight to operate
- Insights can be wrong though numbers are right; but it cannot be right if numbers are wrong
- Insight from models are only as clear as numbers that underpin analyses
- Data is the 'be all' & end all

Data cont'd

- Data generation and management still primordial
- So we work with current data while aiming to improve the data landscape;
- Data quality not an excuse for not using state of the art techniques
- Improve interaction btw stat agencies and data users
- Assumptions matter
 - Can change import of wholesome numbers inputted into a computing process
 - Modeling requires subjective judgment
 - Wrong assumptions can alter great insights, but right assumptions and wrong numbers \neq right results
 - Input assumptions and output insights are only as reliable as underlying statistics

Model Maintenance, Updating and Institutional Synergies

- Model building is arduous; model maintenance, updating and upgrading more difficult
- Model obsolescence a critical challenge
- Modelers are mobile bc those that can model can also do other (sometimes more rewarding) things
- Workforce that build models move afterwards
- Not able to get data on updating culture yet
- But not much is happening here
- Two reasons
 - Political economy of maintaining models vis-à-vis creating new models
 - New projects are profitable for political office holders
 - Many institutions get funding for model building without funding for model updating
 - Worse with individual modelers
- Model updating may be less resource-intensive; but it's nonetheless very expensive
- But its costs are often assumed away
- Modeling in developing countries usually undertaken as one-off efforts
- Not as structured, long term, integrated projects linked over time – India
 - Many models but mostly disjoint and disparate
- Within institution across time and across institutions at any point in time

The Capacity Challenge

- Model outcomes depend on set of assumptions, definitions and structure
- Forecasting is an inherently dangerous activity; future is not certain
- What is left out of a model can be as important as what goes in
- Consequently, there's high premium on the art instead of science of modeling
- Capacity challenge therefore seems most constraining
- Even among quantitatively-inclined individuals, only few can
 - Assumptions and definitions need to be consistent
 - Intricate understanding of the economy in question needed
 - Translating these into numbers that add up
- These make or mar a model

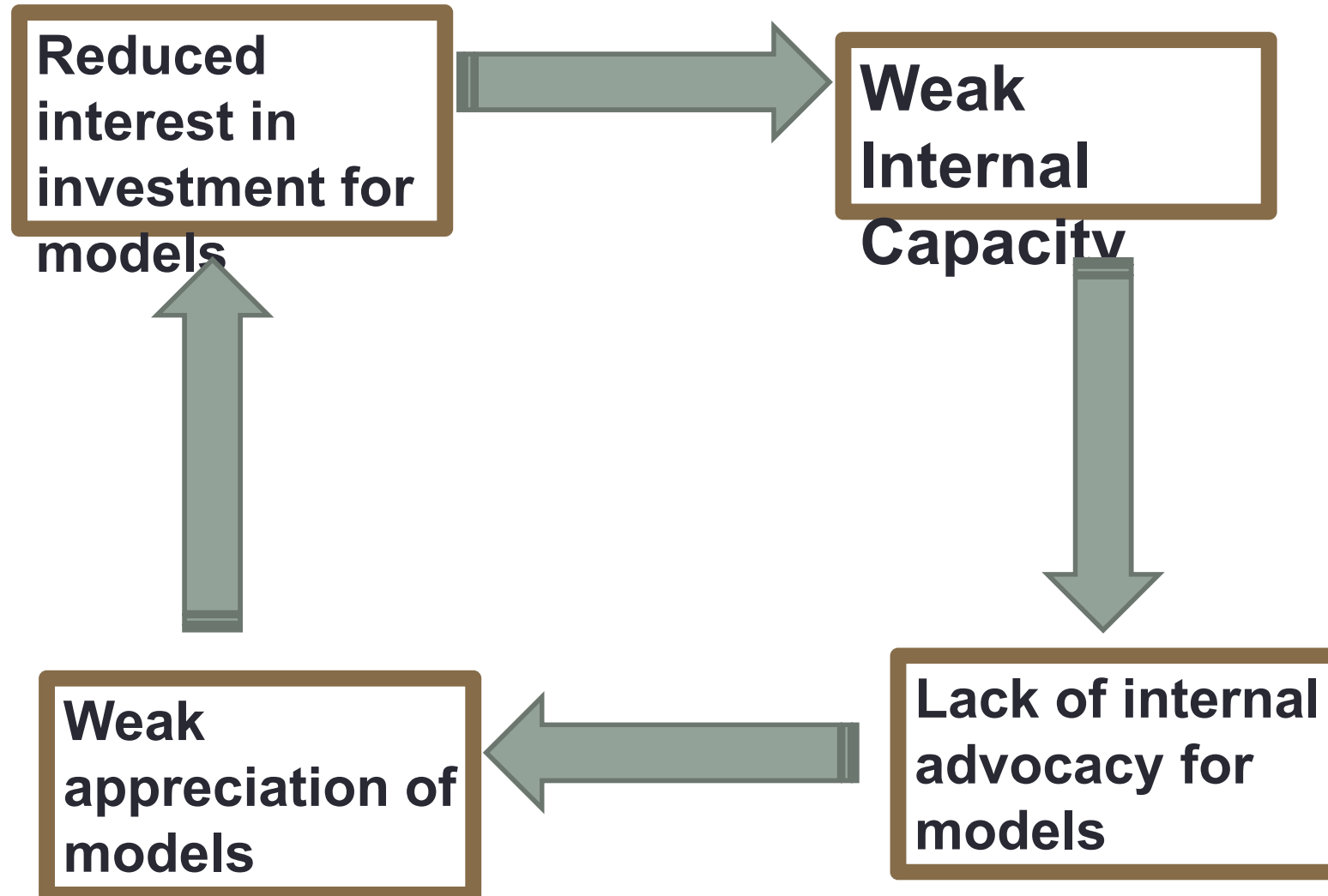
Modeling and Economic Unknowns

- Uncertainty about economic phenomena
 - Link to earlier discuss about nature of african economies
- Definitional difficulties – eg. *exrate under/over-valuation, natural rate of unemployment*
- Time lags between policy inputs and outcomes not precise
- Data gives ‘rear-view’ summary leads to recognition lags
- Bureaucracy leads to implementation lags
- Impact lags exist for all policies
- ‘Appropriate’ figures are unknowns – so knowing when models predict them correctly is also problematic
- Emerging areas with less defined lines put further strain on modeling capacity in developing countries
 - Climate change, natural disasters, poverty/inequality, trade and tourism
- Model use and application are extending beyond traditional areas
 - By demand of policymakers
 - By circumstances of global developments
 - By intuition of modelers themselves

Institutions, Policy Process and Models

- Housed in institutions – some private, some public
- Ordinarily good for sustainability
- But many of these have sub-optimal decision-making processes
- Decision to build, maintain or use models are not straight
- Weak linkage within institutions across time and across institutions at a point in time
- Poor networking to create synergy and complementarity
- Best capacity also not always in public sector
 - Planning Commissions, MoFs, CBs
- Sometimes, no dept dedicated to models for policy use
- Where they exist, they are swamped with other work

Models – the Institutional Challenge



Models and the Institutional Challenge Cont'd

- Few 'lucky' cases where experts are part of policy teams
- Usually mid level and unable to make the case for models
- Busy and mobile skilled manpower
- Overall weak support for research
 - Low R&D budget in many developing countries
 - Not just for modeling, but all research
- Collaboration is still weak
- Donors fund research – and models
 - And give priority to 'urgent', short-term issues with political quick wins
- Long term development agenda requiring models take back bench
- Donor funds attract expatriates almost EXCLUSIVELY
 - No problem!
- But the expatriates do not stay; and they do not domesticate capacity or the models

Model Appreciation, Application and Funding

- Governance is about economics and numbers
- Or so models assume
- Maximization of welfare and minimization of loss functions
- Policy is sometimes about narrower advancement functions for small, but influential groups
- Placing model predictions and instruments at variance with policymakers' objectives
 - Or those of some powerful interest groups
- Political expediency versus economic rationality
 - Worsened by non-focused governments
 - Poorly articulated visions
 - Weak accountability
- Compounded by weakness of the rule of law in Africa
- So...
 - Policymaker keeps modelers busy churning out numbers and never use them
 - Or starve modeling units of funds

Challenge of Suite of Models

- Different kinds of models
 - Macroeconometric, CGE, DSGE, FP, LP, VAR, etc
- Assumptions, specification and estimations differ widely
- Results can also differ widely
- Some take snapshots; others are concerned with long run dynamics
- They can be complements at times
- But can also complicate decision process for the policymaker
- Enough excuse not to use models
- Better approach – keep a suite of models
 - Use each depending on nature of problem needed solving
- Use them alongside good knowledge of the economy
- Economic problems are complex; so no one model is it

Dealing with the Challenges

- Supply-driven versus demand-driven models
- For sustainability; have to feed into policy
- Only as healthy as policymakers' appreciation
- Supply-drive gives birth to new frontiers; but health of existing frontiers depend on demand
- So need to enhance model builders and users
- Public policy should not live on models, but it should not ignore it either

So we need to:

- Find alternatives for reducing aversion to models
- Increase availability of skills that deliver and improve on models
- Encourage linkage between models and policy
- **Collaborate on Data**
 - Collaboration and interaction between data generating and usage institutions
 - Culture of mutual understanding and collaboration between policy and academia
 - Policymaker understands the necessity of paying attention , not only to interests but also to the big picture

Dealing with Challenges Cont'd

- Modelers to appreciate tension between 'optimal' numbers and 'feasible' policy options (the tight rope the policymaker has to walk)
- Results of models to be regarded as one of many interpretations of actual economy; not an absolute one
- Improvements in technology by modelers
- Each group should be modest about what it can deliver
- Neither models nor intuition alone can provide welfare advancement
- Worry also about peculiarities here
- Not carry rational expectations too far
- Nor assume all markets work (or even exist)
- Economy cannot be reduced to a handful of equations
- Intuition without figures or working on narrow interests do not help
- Appreciate growing integration with the rest of the world

The AIAE Response

- Economic agents at nearly all levels depend on models
- Current and expected trends in major macro indices as basis for decisions
 - Corporate performances, financial market indices, household behavioural patterns; optimization forecasts, govt fiscal and monetary outcomes
 - For government and OPS
- But Africa has hardly enjoyed luxury of explicit models with clearly stated assumptions
- Relied on back-of-the-envelope policymaking
- It's convenient, but the broad outcome is the weak performance of the entire system
 - As has been the case over the years
- But govt regularly miss targets
- Loss of confidence on its activities, agencies and institutions
- Need to change the culture of 'rule of thumb' decision making

The AIAE Response

- There is demand for models
- Some institutions are making some efforts
 - Business firms with profit mandate; ZIB, FSDH, BMI, Access Bank
 - They discuss broad trends in the macro economy
 - And provide 'informed guesses' of econ direction
 - Limited capacity within these institutions
- But govt fiscal and monetary policy drives the economy
 - Private sector waits for budget each year;
 - So these feed into micro decisions
- So need to analyze impacts of policies operations; in collaboration with govt
- Model supply face challenges as well – funding; skills; appreciation
- Low attraction to build models by research institutions
 - Engaging limited resources to things that do not yield long term gains

Objectives of the Project

- Provide today's analysis
 - Assessment and forecasts of major macro indicators in Nigeria
- Build tomorrow's capacity
 - Critical and sustainable skill pool that will feed into the work of model building, analysis and forecasting in Africa
- Explicitly target feasible range of variables that impact policy and development
- Analyze major macroeconomic indicators in a timely manner to inform decisions
- Establish independent surveillance system that helps private sector monitor govt actions and rightly set its own expectations and indices to reflect realities

Objectives Cont'd

- Provide independent evaluation of the effectiveness or otherwise of government policy actions and budget parameters under alternative assumptions
- Evaluate government policy frameworks and their likelihood of yielding expected outcomes and critically analyzing the assumptions underpinning them with relevance to the actual outcomes in the economy;
- Track movements in critical aggregates and translate their impact in accessible language
- Provide rallying point for independent evaluation and discussion of economy; collate and crystallize inputs from all segments
- Provide needed intellectual anchor for ex-ante inputs and ex-post assessment in policy through analysis of alternative policy scenarios

How?

- Fill the gaps and provide intellectual leadership in weaving theoretical rigours into realities of day-to-day policy needs using available data
- Have small models anchored on larger models
 - To maintain simplicity of model; but also capture complexity of economy
- Adopt rigorous theoretical processes that incorporate recent developments in literature with current devts in economy
- Use these to analyze present values and make projections about future trends and impacts
- Using simulations under alternative assumptions to estimate impact of selected shocks
- Current effort to be a “going concern” to meet up with the challenges of policy shifts rather than be associated with a particular regime
- Regular updating
- Self regulation through
 - Interaction with stakeholders
 - Dissemination of outputs (“*Economic outlook*”)

Expected Impact

- Change, not just in the modeling culture, but also in the appreciation and use of models
- Impact the academia as well
- Affect the lens through which policymakers views products from the academia
- Have regular means of tracking, not just the past and present trends in major macro indices, but also of gleaning into their future under alternative scenarios

Achievements so far

- Set out to first get two publications
 - A technical assessment of models
 - A policy book on models
- Extensively reviewed models across the continent
 - To come as edited book – first
- Surveyed modeling institutions across the continent
 - Results yet to be analyzed
 - To come as policy book – second

Ahead

- Get into specification of models
- Aim is to cover basic variables
 - For analysis
 - And forecasting
- Get quarterly forecasts and analyses
- Interact with stakeholders
- Have sustainable training and recruitment of young scholars into the project

How we intend to deal with the challenges

- First, get it institutionalized
- Make training/re-training an integral part of the work
- Budget for model updating from the outset
- Network with like-minded institutions
- Regular progress reports to stakeholders



COMMENTS
REACTIONS
QUESTIONS
