

Commentary

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It is tempting to present a mini-paper of my own on the theme of this session, "Using Models in Policy Foundations." My temptation derives not from any major disagreement with the Rausser-Just paper but a desire to relate my personal views on the shortcomings and successes in application of quantitative economic/statistical models to policy formulation and program administration in the USDA in the past decade. However, I will dutifully resist the temptation and offer only a few perspectives drawn from my experience as a point of departure for my specific comments concerning the Rausser-Just paper.

1) There is innate suspicion if not distrust of formal economic models on the part of many policymakers. The derivation of that suspicion derives from multiple sources, e.g. poor quality and reliability of model estimates, poor specification of models (omission of variables important to policymaker), poor communication among policymakers and analysts, and the tendency of policymakers to be their own best economists.

2) Policy formulation is not generally a dispassionate, intellectually pure process — reason and logic do not always prevail. Further, the time horizon is usually short in the decisionmaking context of policy officials. Concern usually centers on the immediate future — it is a rarity to confront true policy watersheds. Formulation of most policies proceeds incrementally from present or recent past policies. The implications for policy models and modelers are important:

- Models must have a demonstrated capacity to produce reliable, plausible, conditional forecasts of policy-critical variables over short- or intermediate-run periods.
- Timely data must be readily accessible and the model must be

capable of being turned around quickly, sometimes overnight, to deal with successive iterations and specifications of policymakers. However elegant the model may be in formulation, it is of little value unless it can be turned around quickly.

3) Model output almost invariably requires translation for effective use by policymakers. The surest way to turn off a busy policy official is to dump the whole load. A succinct statement of the tradeoffs among sometimes competing policy target variables — budget outlays, income, employment, and prices, for example — is essential. Sometimes all that is usable or relevant may be a simple multiplier, price elasticity, or flexibility coefficient. Policy officials are primarily interested in the numbers on the left side of the decimal.

4) As Rausser-Just point out, no model or type of model will suffice for all purposes. For some purposes a simple, least squares multiple regression may be adequate to give the policymaker the parameters he needs to assess a particular policy option and the costs of taking, or not taking, a particular decision. In other cases a large **input-output** or simulation model will necessarily undergird the policy analysis.

5) Finally, the results of a model should not stand alone in presentation to policy officials. After all, models are conceptual abstractions of the organization and performance of complex economic institutions. While we have made great progress in our capacity to handle more variables, including policy variables, and in the design of increasingly complex systems of models, we can still only crudely approximate the behavior of individuals and institutions by means of various statistical/mathematical expressions. As the authors indicate, intuition, judgment, experience, and knowledge of institutions and markets must be coupled with model results.

Where does this leave us in context of the theme of this session — "Using Models in Policy Formulations"? Necessary but not sufficient would be an appropriate answer, I suppose.

Now, a few specific comments on the authors' 10 principles.

- I have no disagreement nor elaboration to offer with respect to Principles 1 (explicitly define purposes and goals of policy models), 2 (exploit the experimental role of policy models), or 7 (use intuition in model development and updating). The authors view policy modeling as a process, not the creation of

a product. To me it is both — the process should lead to useful, applied product, albeit a changing product over time.

- As regards Principle 3 (use post-Bayesian analysis in consideration of complexity and inaccuracy costs) I think I agree. I have seen little direct useful application of Bayesian principles in agricultural policy research and analysis. Therefore I must agree with post-Bayesian analysis. And also, possibly, pre-Bayesian analysis!
- With respect to Principle 4 (policy models should be designated to accommodate and track structural change) and Principle 5 (theoretical structure in the model specification should depend on the amount of historical information), I would merely add that the same principles apply to other types of models — descriptive, explanatory, forecasting, etc.
- One of the most important principles is No. 9 (general purpose data sets rather than general purpose models should be emphasized). I concur with the authors statement that, "Two of the greatest problems policy modeling has faced historically have been the extreme complexity needed in a model in order to be able to address a wide set of issues unforeseen at the time of model construction and the extreme costs imposed by the complexity in model development and use." As they properly state, "Rapid model development (small policy models) can be facilitated by the maintenance of an all-purpose data set." Generally, economists give far too little attention to the quality and suitability of the data used in their analyses. I agree further with the authors on the need for a carefully specified framework to guide development of data. Current data are inadequate in several respects for the types of policy research discussed by Rausser and Just. That problem is likely to become more severe considering the changing organization of agriculture and the conceptual deficiencies in existing data systems.

Although I agree with Principle 9, it is not clear that it is consistent with Principle 6 (emphasize general equilibrium rather than partial equilibrium relationships). Some clarification would be appropriate.

With respect to Principle 10 I can only sympathize with the authors' concerns — the form of government intervention in the agricultural economy has made policy modeling difficult. Ideally,

"policies should be formulated with an appropriate degree of learning in mind." But in the real world, I expect policymakers will continue to enact policies without reference as to whether they enhance learning by economists.

The Rausser-Just paper contains many useful insights and recommendations. I appreciate the opportunity to discuss it with you.