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Editorial

The Value of an Analytical Tool

GIGO is a well-known acronym for garbage-in-garbage-out. What it means is no matter how sophisticated and rigorous you analyze data that are unreliable and without validity (garbage), your results will be unreliable and without validity (garbage). Worse, they will mislead. Analytical tools are important. Apart from their ability to transform discrete facts and meaningless data into logical relationships and trends, they can tell what kind of data to collect, how they should be analyzed and even what improvements can be made on the methodologies so that the results are more precise for decision makers. They provide the basis for the right decision, the appropriate policy, and the effective action. Our contributions to this issue underline this message.

Using supply response analysis and partial demand analysis, Weerasak Kongrithi and Somporn Isvilanonda examine the supply of rice in response to the changes in the price of biofuel crops and other factors. The analysis enabled them to forecast that rice supply would go down with the increase in prices of biofuels. More crucially, the prevailing price policy had a distorting effect on the market mechanism, which would reduce the competitiveness of Thai rice in the world market. They then recommend a non-price policy (R&D support and infrastructure development) to increase production supply and reduce production cost.

The second article, by Prapued Aksornphan and Somporn Isvilanonda, uses the stochastic profit frontier to compare the profit efficiency of the two typical hog production systems in Thailand. The analysis found that the completed system (by which the farm maintains sows to produce piglets to be fattened until market size) was more efficient than the finishing system (the farm only fattens piglets that it buys from breeding farms). The analysis also identifies use of family labor, computerization of the farm database and some operations, and consultation with sources of advice and information as the major factors of efficiency.

The above two articles are examples of empirical work. It is clear that the validity of the empirical results relies on the analytical tools and how the data are analyzed. The issue is how the researcher can improve on the tools for good analysis and thus a good result. The next three articles focus on the appropriateness of analytical tools and methodologies.

Sommai Udomwitid and Suwanna Praneetvatakul assess the appropriateness of the rice production function being used to analyze the efficiency of input use in Thailand's rice farms. They found that the translog production function in consideration with the damage control function would be the most appropriate approach for assessing the efficient input uses in rice production in Thailand. The value of this finding is to help the analyst avoid overestimating the efficiency of rice input. Tested against the empirical results, the methodology was confirmed to be appropriate.

Our fourth contribution addresses the measure of managerial efficiency. Akarapong Untong examines the bias of using the data envelopment analysis (DEA) two-stage method to measure efficiency. What the study tells is that the analyst should test the variance and correlation between inputs and exogenous variable before applying the DEA two-stage method.

Finally, Suppanunta Romprasert uses forecasting models for futures price of the natural rubber ribbed smoked sheets no.3. She employs the least mean squared error as a criterion for selecting the best prediction model. She found that the analytical model is applicable and would facilitate similar or related studies in forecasting the futures prices of other commodities. Time-series data was found to be suitable for the forecasting model.

To summarize, the scientific value of appropriate analytical tools is to give a precise indication for decision-making; the economic value of a well-informed decision is that it improves production efficiencies; and the development value – which is the ultimate test of the value of an analytical tool – is that the right decision improves the lives of the farmers.

Rounding up this issue is a review of a comprehensive textbook in applied econometrics written by a Thai professor. The book's author, Aree Wiboonpong of Chiang Mai University, has compiled, made a critique of the econometric tools, and described their appropriate applications in agricultural market research. The reviewers Supachat Sukharomana and Sanha Hemvanich point out gaps in the work. The author in my communication with her acknowledges there are some areas the book barely covers. She urges researchers and practitioners to write on these to provide Thailand's economics research community with as complete as possible a set of econometric tools and guides for their application.