Introduction

Introduction to paper and commentaries on the Delphi technique

Rowe and Wright's paper ''The Delphi Technique as a Forecasting Tool'' was initially reviewed by four experts in the area of judgmental forecasting. Following three rounds of revisions, the paper was accepted for publication. It was then sent for commentary by Professors Ayton, Ferrell, and Stewart.

The lead paper should be of interest to researchers because it identifies important aspects of the Delphi procedure that have not yet been studied. In particular, there are few validation studies and these often omit descriptions of the relevant conditions. This makes it difficult to identify which aspects of Delphi are related to accuracy and the conditions under which Delphi is most useful.

Ferrell suggests that it might be time to abandon research on Delphi. This is not as radical as it sounds. His point is that we should take a more general view of group processes. The key is to find what group processes provide the best way to make forecasts in which situations. Ayton and Stewart also argue that findings from research on group process and decision making are relevant to this issue.

Another way of saying this is that one should have a broad definition of Delphi. Here is a broad definition: ''Delphi involves anonymous forecasts made on two or more rounds by a group of independent heterogeneous experts who receive feedback between rounds.'' This allows for incorporation of key elements of judgmental forecasting and it also allows for flexibility for such things as the amount, type, and timing of feedback. It would also allow one to identify salient characteristics of the experts.

Does the definition serve any purpose? I think it does. Delphi offers a convenient framework to implement basic principles for effective judgmental forecasting. This framework works well in Rowe and Wright's (2000) discussion of principles for judgmental forecasting. The term also offers a convenient way for people to communicate about judgmental forecasting procedures. Finally, there is an existing useful body of research on Delphi.

In my opinion, the primary problem is that few validation studies have been done. Here is an example of the further research that might be considered: One of the basic principles used in Delphi is that experts' judgmental predictions should be made independently because of evidence that group pressures can harm accuracy. Perhaps the traditional design of Delphi is not implementing this principle in the most effective manner. To reduce group pressure, it seems sensible to provide information after round one, but not the *forecasts* made by other experts. For example, if Expert A learns that Experts B and C considered factors that he overlooked, an adjustment could be made based on that information. But if Expert A also receives information about B and C's forecasts, this might produce a bias towards conforming with the group without providing useful information. In this case, Expert A has no information on whether B and C also took account of all the things that A had considered. So I would like to see an experimental study that compares Delphi where the feedback consists only of information relevant to the prediction versus a traditional version that transmits both information and forecasts. I would expect the former to be more accurate. It would also be useful to see whether it is better to provide information from all experts, or merely from those whose predictions are at the extremes. This research can be aided by computers that can control

the type of feedback provided to panelists and it can monitor the use of this information by each participant.

Additional research might also look at implementation. It seems clear that Delphi is much more accurate than traditional group meetings. Nevertheless, people seem happier in traditional meetings, so this is how they usually make judgmental forecasts. Would this situation change if Delphi procedures were more readily available in software?

Reference

Rowe, G., Wright, G., 2000. Expert opinions in forecasting: Role of the Delphi technique. In: Armstrong, J.S. (Ed.), Principles of Forecasting: A Handbook for Researchers and Practitioners. Norwell, Mass: Kluwer Academic Publishers, forthcoming.

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