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# Current validity of the Delphi method in social sciences

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## Abstract

The Delphi method is a popular technique for forecasting and an aid in decision-making based on the opinions of experts, which has been in existence for over half a century. This work evaluates its methodology and reviews its validity in the present day, especially in the area of Social Sciences. Three recent applications in this field are also explained, professional in nature, which have some characteristics that are not frequent with respect to other Delphi studies published. The main aim of two of these studies was to provide input for economic or statistical quantitative models, using the judgement of expert groups, while the third study aimed to analyse a complex social reality by means of a Policy Delphi in order to obtain reliable information before taking a policy decision. These applications highlight how this technique may be adapted to different social realities and requirements, making a positive contribution to social progress, provided it is applied with the necessary methodological rigour and with a good knowledge of the social medium in which it is being applied. Finally, there is an explanation of a number of lessons learned from the theory and aforementioned experiences, which may contribute to the successful outcome of a Delphi exercise.

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*Keywords:* Delphi method; Consensus; Policy Delphi; Expert judgement elicitation; Delphi validity

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## 1. Introduction

More than 50 years have passed since the first Delphi experiment took place and more than 40 since the first article came to light describing its use and procedure. Since then, the Delphi Method has become

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a widely used and recognised instrument to make predictions and help decision-making. In this process of diffusion it has gone through several different stages since its birth. From the first stage of secrecy that accompanied its genesis with military aims, it has advanced through successive phases of novelty, popularity, criticism and re-examination, until reaching the current phase of continual but relatively infrequent use, in which it has remained since the 80s [1].

Throughout these years, the Delphi Method has broadened its fields of application and has been the object of fierce criticism and numerous evaluations, in which its weaknesses and strengths have been highlighted, as well as its potential. It is possibly the best known forecasting technique with its own name, based on the opinion of experts, and about which most has been written, but is it still valid? Is it still being used for academic and professional purposes or does it now form part of history? Has it overcome its weaknesses? What has been learned throughout these years?

In this article we will note some answers to these questions, paying particular attention to the use of this technique in social sciences and also explaining some recent applications run by the author, which will serve to compare the contributions of other authors and to present possible fields of development and application for the technique.

## **2. The Delphi method**

At the end of the 40s, researchers at the RAND Corporation (Santa Monica, California) started to investigate the scientific use of expert opinion. Studies were published on the superiority of group opinion over individual [2] and on the justification of expert opinion in inexact sciences and its scientific use [3]. The Delphi method, with all its defining characteristics, was first used at the headquarters of this corporation as part of a military defence project, which for security reasons was published twelve years later [4]. From the RAND Corporation also came the first documented proposal to use the Delphi technique for non-military purposes [5], where a proposal was made for it to be used in planning developing economies.

In the sixties, and as a result of the declassification of the Delphi method by the American Armed Forces from its previous category as reserved for military use, its use spread rapidly, both geographically and thematically, particularly towards technological forecasting and towards the evaluation of complex social problems.

The Delphi method was conceived as a group technique whose aim was to obtain the most reliable consensus of opinion of a group of experts by means of a series of intensive questionnaires with controlled opinion feedback [4].

Later applications of the technique have eliminated the restriction of the obligatory search for consensus, so that today it might be defined as a social research technique whose aim is to obtain a reliable group opinion using a group of experts. It is a method of structuring communication between a group of people who can provide valuable contributions in order to resolve a complex problem [6].

Its main characteristics are as follows:

- It is a repetitive process. The experts must be consulted at least twice on the same question, so that they can reconsider their answer, aided by the information they receive from the rest of the experts.
- It maintains the anonymity of the participants or at least of their answers, as these go directly to the group coordinator. This means a group working process can be developed with experts who do not

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