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# The over-optimism among experts in assessment and foresight

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## Abstract

It is still disputed whether foresight exercises should be based on top-expert assessments or on a broader base of less specialised experts, and whether the self-rating of experts is an acceptable method. Using the German 1993 and the Austrian 1998 Technology Delphis, this study addresses both questions. Self-rating is, in fact, an appropriate method for selecting experts. But the assessment of self-rated top experts tend to suffer from an optimism bias due to the experts' involvement and their underestimation of realisation and diffusion problems. The degree of optimism is positively correlated with the degree of self-rated knowledge, and it is more pronounced for the least pioneering and for organizational innovations. Experts with top self-ratings working in business have a stronger optimism bias than those working in the academia or in the administration: Consistent with the insider hypothesis, they are most optimistic with regard to realisation, innovativeness, and potential leadership in economic exploitation. Given the optimism bias, foresight exercises should base their panels on a fair mixture of experts of different grades, with different types of knowledge and affiliation, and not only on top specialists of the respective field. Delphi-type exercises, therefore, offer an advantage relative to forum groups or small panels of specialists.

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## 1. Introduction

Whether the foresight of experts and, especially, of self-rated experts is superior to that of others has been under discussion since the earliest days of the Delphi exercises.

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Adequate tests are rare, however, that a broad range of positions prevails. Foresight exercises based on forum groups or expert panels implicitly assume that it pays to make use of the highest possible level of expertise. Delphi studies, in contrast, infer that it pays to base the respective assessment or foresight on different levels of expertise; they usually call for the self-rating of respondents and make full use not only of the answers from top experts but also of experts from the upper half range at least. A close examination of the Austrian Technology Delphi [1] underlines this practice: It reveals a marked optimism among self-rated top experts. This check cannot verify, however, whether this optimism is justified or not, i.e., whether the top experts give better counsel or worse than those experts who consider themselves less informed. Due to its design as a Decision Delphi, which is not on the lookout for emerging technologies, but for technologies and/or technological market niches harbouring a potential for Austrian leadership within the next 15 years, an evaluation cannot take place for at least another decade. The German Technology Delphi, however, a classical Delphi querying the time horizons for the realisation of the respective innovations, provides for such a test and supports the hypothesis that top experts are in fact overoptimistic, clearly underestimating the realisation and diffusion period for short- and medium-term projects. Top experts working in enterprises tend to have the most pronounced optimism bias according to the Austrian data. The evidence from both sources combined suggests that foresight exercises should include not only top experts of the relevant field, but also experts with a broader range of interest as well as experts with widely differing backgrounds. It may provide a further argument in favour of the use of Delphi-type investigations as an instrument of foresight, in addition to the well-known advantages of anonymity, lack of a bias resulting from the influence of dominating personalities within the group, and especially of the convergence of results.

The paper starts with a summary of the literature on the potential sources of bias in expert assessments, followed by a short description of the Austrian Technology Delphi in Section 3. The main part elaborates on the differences between the answers of the experts in the Austrian Technology Delphi evaluating their question-specific expertise as top (one, on an ordinal scale from one to five) and those rating it with two or three.<sup>1</sup> The differences in assessment among the respondents of different levels of self-rating will be analysed in terms of economic area, type of innovation (technical or organizational), and degree of innovativeness. Section 5 examines the German Technology Delphi to find out whether the favourable assessment of top experts in fact turns out to be correct, reflecting the top-experts' better insight, or whether it results from over-optimism. Section 6 asks which group of respondents (business, academia, and others, mainly bureaucrats) give the most optimistic assessment in the Austrian Delphi. Section 7 provides a conclusion.

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<sup>1</sup> The answers of respondents rating their own specific knowledge with four or five were excluded, as they were believed to vitiate rather than to improve the results.

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