Research Based Curricu<u>la</u>





Resource Six Overview



Topic Judgemental Forecasting Principles

A-Level Modules

Making operational decisions to improve performance; managing inventory and supply chains

Objectives

By the end of this resource, you will be able to:

- ✓ Demonstrate knowledge of terms, concepts, theories, methods to show an understanding of how individuals and organisations are affected by and respond to business issues;
- ✓ Analyse issues within a business, showing an understanding of the impact on individuals and organisations of external and internal influences
- ✓ Identify the connections between decision-making theory and practice

Instructions

- 1. Read the data source
- 2. Complete the activities
- 3. Explore the further reading

Context

Uncertainty is a situation which involves imperfect or unknown information. It applies to predictions of future events, to physical measurements that are already made, or to the unknown.

Archetype is something that is considered to be a perfect or typical example of a particular kind of person or thing because it has all their most important characteristics.

Resource Six Data Source



Adapted from 'Principle of Business Forecasting' (ord, Fildes and Kourentzes, 2017) To summarise everything that we covered in the previous resources, a part of Judgmental Forecasting Principles from "Principles of Business Forecasting" book is provided below. Some ideas are specifically written for the forecasting context, but they can be easily adapted to the general decision making context. Following these principles can help to avoid some biases and problems that come with human decision-making process.

 Identify the decision to be made and the inputs required to make that decision.

We start with the decision to be made and then work backwards to determine what information is needed in order to make that decision. As we follow this reverse process, we should identify the key variables and how to measure them. Oftentimes, we may have to modify our objectives somewhat, because either the desired variable is not measurable or the information will not be available in time. At the end of this step, we should have a clear idea of the variables whose values we need to forecast.

 In asking forecasting related questions, of individual experts or groups, develop clear wording for the questions, consider alternative versions, and always pretest.

Consider the following two questions:

- 1. In extreme circumstances in a labour dispute, should employees have the right to withdraw their labour?
- 2. Should employers have legal means to terminate lengthy strikes that are damaging to the economy?

The two questions could both be interpreted as asking "Do you support employees' right to strike?" yet the responses may be very different. Even the two terms "withdraw their labour" and "strike" may evoke different responses. Thus, it is important to phrase questions clearly, to avoid emotive or ambiguous terms, and to pretest with individuals who are representative of those likely to respond, in order to ensure that the results will be meaningful.

Resource Six Data Source



- Use multiple experts chosen for their different perspectives on the forecasting task.
- Ask experts to justify their decisions in writing.
- Keep records of past forecasts and use them to provide feedback.

Records can yield insights about both the events forecast and the performance of individual experts. This second feature is particularly useful when similar situations are examined on a continuing basis (e.g., new product evaluations or investment opportunities). Confidential feedback to individuals can also help them to calibrate their own forecasting performance.

- When carrying out a Delphi study, use between 5 and 20 experts who possess domain knowledge.
- Continue Delphi polling until the responses show stability; generally, three structured rounds are enough.
- Focus scenario construction on key strategic questions and uncertainties facing the organisation between now and the horizon year (rather than on general questions that fail to delineate key uncertainties).

Many scenarios are used to assess the timing of future events, such as when electric-powered automobiles will capture 25 per cent of the U.S. market. Careful wording is needed to ensure that everyone is considering the same issues.

Use multiple scenarios to focus on uncertainties.

The progress of electric vehicles will depend upon relative fuel prices, technological issues relating to the development of batteries, the provision of recharging facilities, and government subsidies. Different scenarios should emphasise particular developments.

 Develop scenarios that characterise "extreme" archetypes aimed at capturing possible diverse futures.

Using archetypal cases allows the range of possibilities to be circumscribed so those resulting scenarios will be relevant to the context of the decision.

Resource Six Activities



Activities

- 1
 - How many experts are required to conduct successful Delphi study?
- 2. How many rounds for the Delphi method are needed?
- 3. Scenarios are great for _____ problems.
- 4. Why is it necessary to ask experts to justify their decisions in writing?
- 5. What type of feedback can you provide experts?
- 6. Why do companies need to keep records of past decisions?



Resource Six Further Reading



Explore

Armstrong, J. S. (ed.) (2001). Principles of Forecasting: A Handbook for Researchers and Practitioners. Boston and Dordrecht: Kluwer.

Ord, K., Fildes, R., Kourentzes, N., 2017. Principles of Business Forecasting, 2nd Edition. Wessex Press Publishing Co.

Understanding Decision Making: https://courses.lumenlearning.com/principlesmanagement/chapter/11-2-understanding-decision-making/



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