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# The nature of strategic foresight research: A systematic literature review

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#### ABSTRACT

Strategic foresight is a scientific field in rapid development judged from the increase in number of yearly publications the last decade. What characterizes the research in this field? To answer this question we undertook a systematic literature review searching two library databases, Business Source Complete and ScienceDirect, for scientific articles related to the topic 'strategic foresight' in the context of the organization. The search revealed 59 publications published between January 2000 and October 2014. The articles were systematically organized and analyzed. This review provides the status of this emergent research field. Although we witness a growth of academic interest in strategic foresight, we argue that this scientific field is weakly organized and there is a lack of theoretical progress. We have analyzed the research subjects addressed in the 59 articles, and from this a taxonomy of eight categories. Three categories dominate in terms of frequency of articles: methods applied, organizing practices, and experiences gained. There is only limited research on motivation and use, value contribution, and innovation. Explorative research dominates, and a variety of theoretical perspectives has been used. Some attempts to build conceptual foundations can be observed, but in general, we found no single perspective that deserves loyalty on which a coherent theoretical foundation of strategic foresight is built. Strategic foresight has a great potential of contributing more to the success of a firm if the research moves from today's dominating explorative research to also include more explanatory research.

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#### 1. Introduction

This article reviews existing research on the use of strategic foresight in firms. Strategic foresight involves understanding the future and applying future oriented insights to an organization's strategic activities and decision making. Rohrbeck et al. (2015) gives an historical background of the foresight research field, from its birth in the 1950s through scenario building in the 1960s-1970s, to organizational integration from 2000 to present. Different terms have been used to relate foresight thinking to strategic decision making in corporations. Hamel and Prahalad (1994) define industry foresight to be deep insights into trends that can be used to create new competitive space. Slaughter (1997) uses the term *strategic foresight* to represent a fusion of futures methods with those of strategic management. Ahuja et al. (2005) use foresight as a personal power of foreseeing. They define managerial foresight as the ability to predict how managers' actions can create competitive advantage. Rohrbeck et al. (2015) use the term corporate foresight as a practice that permits an organization to lay the foundation for a future competitive advantage through value creation.

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In 2010, the journal *Technological Forecasting and Social Change* devoted a special issue to *strategic foresight* (vol 77, Issue 9). To introduce the concept of strategic foresight, Coates et al. (2010) use the French concept 'la prospective' as the starting point: "la prospective is foresight when we add the adjective strategic in English, i.e. *strategic foresight*." The reason to look at the French approach to foresight is the emphasis that is put on human decision-making, action consequences of future states, and the participation of the decision-maker in the whole foresight process. With this perspective, strategic foresight has a clear link to strategic management and should be "understood as the processes that assist decision makers in charting the firms' future course of action." (Vecchiato, 2012). On this basis we decided to do a literature review on the term "strategic foresight."

Common to the various foresight terms referred to above, strategic foresight is a dual purpose task of 1) observing, perceiving, and capturing factors that is likely to induce future changes, and 2) dealing with these changes by deciding appropriate organizational responses, as illustrated in Fig. 1. According to the la prospective approach, these two processes should not be dealt with separately where the futurist performs the foresight part and the decision-maker the strategy part. It is an integrated process where the decision-maker participates in the foresight process and vice versa.

The aim of this literature review is threefold. First, we provide an updated overview of strategic foresight that captures the research activities in this rapidly evolving area. We restrict the focus to manuscripts

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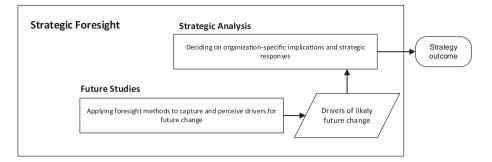


Fig. 1. Strategic foresight - a conceptualization.

that explicitly incorporate the research of strategic foresight as envisaged by our conceptual framework. Our second goal is to structure our information in such a way that research contributions can be related to each other. This will ease researchers' search for relevant studies. Third, structuring the literature in a detailed and systematic manner also clarifies which issues are not well covered. We intend to identify knowledge gaps and opportunities for contributions in order to guide future research.

There are several reasons why strategic foresight should attract researchers. First, foresight and foresight methods are well-known areas and have long been applied in practice. Strategic foresight as a concept, however, is fairly new and puts emphasis on bringing these forward-looking techniques into strategic decision making. Strategic foresight provides insights into organizations' operating environment of challenges and opportunities and identification of innovations and opens up the competitive space. Second, strategic foresight must be anchored in strategic management—a multidisciplinary area that should attract researchers from areas such as management, economics, organizations, sociology, and psychology. Third, although research on strategic foresight is still limited (Jissink et al., 2014), there is a growing research interest in the field. The existing literature is nevertheless fragmented and not properly integrated. The academic field is weakly organized (Rohrbeck et al., 2015).

In this study, we set the contextual limitation to contributions presenting research on the adoption and implementation of strategic foresight, including antecedents and consequences. We set the temporal limitations for this review to contributions from January 2000 until October 31, 2014. We utilize research of verified quality, which means that we only address articles in peer-reviewed journals. We describe our methodology in Section 2 and then present our findings in Section 3. In Section 4, we analyze and discuss existing research in order to identify knowledge gaps, and we suggest opportunities and approaches for future research. Section 5 concludes the article.

#### 2. Method

Our focus here is on a stand-alone literature review, as opposed to literature reviews that set the theoretical background for a specific research question. Following Fink (2013), a stand-alone literature must be *systematic* in following a methodological approach, *explicit* in explaining the procedures by which it was conducted, *comprehensive* in its scope of including all relevant material, and hence *reproducible* by others who would follow the same approach in reviewing the topic. Our method, as well as the research questions, are based on the guidelines and principles outlined by Okoli and Schabram (2010).

The two main objectives for this review are to identify, classify, and summarize existing research on strategic foresight; and to identify areas and opportunities for future research. The methodology for the systematic literature review is documented below.

#### 2.1. Review topics

Research reports published in scientific journals are organized in fairly consistent formats. It starts with an introduction where the research is positioned within a larger context and the research question is presented, followed by the theoretical foundation on which the research is to be based. Then the research design is reported and the methodology specified. Finally, the findings are presented including contributions and conclusions.

The review topics selected and addressed by this literature review follows this general structure. We shall, however, start by collecting some descriptive statistics. More

specifically, based on Okoli and Schabram's guidelines (2010), we have defined the following review questions:

RQ1: Which journals are used for publication of strategic foresight research; who publish where and when?

RQ2: What research subjects have been addressed?

RQ3: What theoretical frameworks and reference theories have been applied to study the topic? We would like to know which theories and models have been used in existing research.

RQ4: What research methods have been used? As a guide to future studies, we identify the approaches that have been adopted. We use Orlikowski and Baroudi's (1991) conceptual and empirical categories to organize the approaches. Conceptual research refers to studies that formulate emerging concepts, models, and frameworks, while empirical research refers to surveys, interviews, case studies, multi-method research, and experiments.

RQ5: What conclusions can be drawn from existing research? We summarize and analyze findings from existing research in order to draw conclusions on central issues.

#### 2.2. The search process

The search process was organized according to guidelines found in Okoli and Schabram (2010); Webster and Watson (2002); Kitchenham et al. (2009). The key search word was "Strategic Foresight." Our goal was to identify articles presenting research of validated quality. We searched two leading online directories, the Business Source Complete (EBSCO Host) and ScienceDirect. Following the recommendations of Webster and Watson (2002), we also reviewed the citations in the articles identified in the directories

#### 2.3. Inclusion and exclusion criteria

Our review targeted peer-reviewed articles on the use of strategic foresight published between January 1, 2000, and October 31, 2014. Only articles in English were included. Our search included articles on the following three subtopics according to our definition of the concept (Fig. 1):

- Foresight: the application of foresight methods and techniques to capture any political, social, economic and technological drivers for future state conditions
- Interconnection: the linking of drivers to the process of strategic decision making and strategy development in organizations.
- Strategy: the decision-making of defining strategy goals, action and action consequences required for strategy development; transforming the drivers and the strategic decisions to strategy outcome.

Articles on the following topics were excluded:

- · Articles on national and regional policy making
- · Non-research articles that were purely descriptive
- Articles presenting research in progress
- Articles that did not match the inclusion criteria

#### 2.4. Data collection

The data extracted from each study were:

- The source (journal) and full reference
- $\bullet\,$  The authors, their institutions, and the countries where they were situated
- · Classification of research methods
- · Theoretical frameworks and reference theories used
- · Main topic area
- · Research questions
- Summary of the study, including the main research questions and their answers.

Methodologically, we followed the recommendation of Kitchenham et al. (2009); one researcher extracted the data and the other checked the extraction. When there was disagreement, we discussed the issues until we reached an agreement.

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