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Corporate foresight and its impact on firm performance: A longitudinal analysis

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ABSTRACT

Corporate foresight is applied with the expectation that it will help firms to break away from path dependency, help decision makers to define superior courses of action, and ultimately enable superior firm performance. To empirically test this assumption, we developed a model that judges a firm's future preparedness (FP) by assessing the need for corporate foresight (CF) and comparing it to the maturity of its CF practices. We apply a longitudinal research design in which we measure future preparedness in 2008 and its impact on firm performance in 2015. The results indicated future preparedness to be a powerful predictor for becoming an outperformer in the industry, for attaining superior profitability, and for gaining superior market capitalization growth. In the article, we also calculate the average bonus/discount that can be expected by sufficiently/insufficiently future-prepared firms.

1. Introduction

The research and practice of strategic foresight (to which we refer as corporate foresight) has a tradition that reaches back to the late 1940s (Coates et al., 2010). Such practice in organizations had already seen a golden age in the 1950s, driven in particular by the "La Prospective" School of Gaston Berger in France and the works of Herman Kahn of the Rand Corporation in the US (Rohrbeck et al., 2015). Since then, many firms have invested in building corporate foresight (CF) units (Battistella, 2014; Becker, 2002; Daheim and Uerz, 2008), including Cisco (Boe-Lillegraven and Monterde, 2015), Daimler (Ruff, 2015), Deutsche Bank (Rollwagen et al., 2008), Deutsche Telekom (Rohrbeck et al., 2007), France Telecom (Lesourne and Stoffaes, 1996), L'Oreal (Lesourne and Stoffaes, 1996), Pepsi (Farrington et al., 2012), Siemens (Schwair, 2001), and SNCF (Lesourne and Stoffaes, 1996). The expectation is that CF will enable these firms to spot trends ahead of competitors, gain deeper insight into how such trends will affect their organization and identify the most effective response, and ultimately gain a competitive advantage (Hamel and Prahalad, 1994; Hines and Gold, 2015).

Despite the long tradition of applying CF practices, evidence on their impact on firm performance is scarce. The case study research has provided us with some insights into the causal links between corporate foresight practices and firm performance, and anecdotal evidence has been presented to determine its impact (Rohrbeck, 2012; Ruff, 2006; Ruff, 2015). The main reason for the scarcity of conclusive evidence on the impact of CF is the difficulties associated with measuring it. For example, establishing a causal link over time, whereby the impact can often be expected to play out over several years, is confounded by many other factors. Industry rivals may eventually find ways to offset the advantages that are gained through CF, macroeconomic factors may shift again, reducing the impact of CF-triggered actions, and the rules-of-the-game in the industry might change with the entry of new rivals (Helfat et al., 2007).

With this paper, using a longitudinal research design, we investigate the impact of CF on firm performance. Using data on CF maturity from 2008 and firm performance data from 2015, we are able to investigate the impact with a time-lag, which can be judged as sufficient for the impact of CF to play out. In addition, we propose a new construct, which we call future preparedness and which is built by comparing the CF need with CF maturity.

Our paper is structured into five main sections. In Section 2, we conceptualize future preparedness and introduce the main constructs of our measurement model, CF need, CF maturity and firm performance. In Section 3, we describe our research design. In Section 4 we report our findings. In Section 5, we discuss the limitations of our research and

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suggest future research trajectories. Finally, Section 6 summarizes our contributions.

2. Conceptualizing future preparedness

2.1. Corporate foresight

The interest in CF has always been fuelled by the expectation that CF practices, processes, and organizational units will boost the ability of a firm to attain superior performance (Vecchiato, 2015). The early work of Gaston Berger in the 1950s emphasized the need to create future perspectives that are shared in a management team (Berger, 1964). These representations can clarify the ultimate aims for which an organization strives and facilitate backward planning to inform the choice of means (Berger et al., 2008; Coates et al., 2010). Hamel and Prahalad (1994) argue that high profitability is only available for firms that can overcome crises by "competing for the future", which they contrasted against firms that compete by restructuring and downsizing. Rohrbeck (2012) studied 19 cases and concluded that CF serves as an important translational process that leads to the appropriation of new strategic resources, which then leads to an enhanced competitive position. Using a cross-sectional sample of 77 firms, Rohrbeck and Schwarz (2013) reported value creation from acting earlier than competitors and influencing other actors to act in a way that is favourable to the focal firm. Finally, Gavetti and Menon (2016) and Peter and Jarratt (2015) drew on behavioural strategy and single-case studies to propose that CF is a set of practices that enables strategists to identify a superior course of action and foresee its consequences.

For this paper, we define CF as a set of practices that enable firms to attain a superior position in future markets. However, we also acknowledge that more CF may not always be better. Day and Schoemaker (2005) argued for a state that they call 'neurotic', which occurs when a firm that has peripheral vision capabilities that exceed its needs. Burt et al. argue that foresight may trigger a condition in top management teams that they call 'managerial hyperopia', i.e., being too focused on managing distant futures, while failing to attach sufficient attention to what is close at hand. Hence, our approach will have to move beyond measuring absolute levels of CF and put them in context with the CF need. We expect that firms can make use of CF to identify the factors that drive environmental change, foresee future market changes, and define a course of action that leads towards a superior market position—and subsequently to superior firm performance.

2.2. Conceptualizing future preparedness

Compared to the previous studies, we advance the conceptualization by introducing the relative construct future preparedness (FP). This construct is built by comparing the need for CF with the maturity of the CF of the focal firm. The underlying rationale is that if we want to determine if, for example, better reflexes increase the likelihood of winning a sports competition, it will matter if my competitive environment is a game of chess or a game of table tennis. This importance of aligning the maturity to an environment-induced need has also been recognized in Day and Schoemaker's (2005) peripheral vision model. For our conceptual model, we build a CF need index on the basis of Day and Schoemaker's (2005) environmental complexity and environmental volatility scales. The maturity index is based on Rohrbeck's maturity model (Rohrbeck, 2010a; Rohrbeck, 2010b). Both indices are converted into a four-level score, which allows for a direct comparison of both. Therefore our model does not assess the absolute level of reflexes (the analogy being CF maturity in our model), but the level of appropriateness of the reflexes for a given competitive environment (FP in our model).

We expect that FP would as a consequence also be a more powerful indicator for judging a firm's attractiveness for investors than CF maturity alone. Similarly, an assessment that indicates a lack of FP would be a strong signal for top management that mid- and long-term competitiveness is threatened (Hamel and Prahalad, 1994; Tushman and Oreilly, 1996). This view is also reflected in the German law that governs publicly traded organizations, as it formulates the firm requirement for such organizations to have a strategic foresight system. However, with the lack of a transparent indicator, the requirement is difficult to enforce. If FP hence proves to be measurable across industries,

- for shareholders, it could become a powerful indicator to hold management accountable to focus sufficiently on the mid- and long-term to ensure a firm's future success;
- for policy makers, it could become a formal requirement that ensures that firms have systems in place that raise the probability of survival and that management pays sufficient attention to mid-term value creation as opposed to short-term gains;
- for management, it could become a benchmarking tool to ensure that (a) they develop adequate future preparedness in their organization and (b) that their corporate foresight systems are competitive when compared with their industry rivals.

In the following section we will discuss the literature on which we draw to build our measurement model. The detailed operationalization of our constructs can be found in Table 3 in the appendix.

2.3. Measuring corporate foresight maturity

Different models have been proposed to measure the foresightedness of a person or organization. Grim (2009) proposed a model that combines process and leadership elements. Day and Schoemaker (2005) introduced such a model under the term *peripheral vision capabilities*, which includes the categories of leadership orientation, knowledge management systems, strategy making, organizational configuration, and culture. Hines et al. (2017) developed a competency model that can be applied to judge the proficiency of individuals in performing a futurist role.

For our study, we chose Rohrbeck's maturity model for three reasons. First, this model measures CF maturity on the organizational level. Second, it specifies practices that can be measured both through the descriptive four-level scale of the original model and as a Likert scale (Jissink et al., 2015; Paliokaitė and Pačėsa, 2015). Third, the maturity model has already been used to investigate the relationship between CF and firm performance (Jissink et al., 2014; Rohrbeck, 2012; Rohrbeck and Schwarz, 2013). From the original model, we decomposed the dimension 'people and networks' into its two subcomponents. We further added a process layer (see Fig. 1), which facilitates the understanding of how the different practices of the maturity models contribute to a firm's ability to transform signals into insights, which inform new courses of action.

In the process layer, we define three process steps:

- *Perceiving*: Practices that firm use to identify the factors that drive environmental change. Firm aim to identify (weak) signals ahead of competition to gain a lead-time advantage (Ansoff, 1980; van der Duin and Hartigh, 2009).
- *Prospecting*: Practices through which firms engage in sensemaking and strategizing. Practices include working with analogies, scenario analysis, systems-dynamics mapping, and back casting (Bezold, 2010; Daft and Weick, 1984; Rhisiart et al., 2015). In addition, firms aim to foresee the right time to act by identifying tipping points. The aim of this phase is to gain an insight advantage, which permits firms to identify a superior course of action that is distant from the status quo of the industry (Gavetti, 2012; Gavetti and Menon, 2016).
- *Probing*: Practices through which firms move from what Gavetti and Levinthal called 'cognitive search' in the perceiving and prospecting phase to 'experimental search' in the probing phase (Cunha et al.,