ARTICLE IN PRESS
TFS-18074; No of Pages 12
Technological Forecasting & Social Change xxx (2014) xxx–xxx

Contents lists available at ScienceDirect

Technological Forecasting & Social Change

Creating value through foresight: First mover advantages and strategic agility

Riccardo Vecchiato [1]

Kingston University, London, Kingston Business School, Kingston upon Thames KT2 7LB, England

ARTICLE INFO

Article history:
Received 21 June 2013
Received in revised form 25 August 2014
Accepted 28 August 2014
Available online xxxx

Keywords:
Environmental uncertainty
Corporate foresight
Adaptation
Inertia
Competitive advantage

ABSTRACT

This paper explores the relationship between corporate foresight and the capability of the organization to respond successfully to external changes (i.e., strategic agility). More generally, we investigate the value that firms, facing growing uncertainty because of the fast pace of external changes, create through foresight. We base our analysis on three different research streams: the first one is literature on environmental uncertainty; the second one is literature on strategic planning and first mover (dis)advantages; and the third one is literature on organizational learning and organizational memories. We thus focus on two fundamental questions which characterize the interaction between turbulent environments, foresight and long-term performances: what kind of knowledge should organizations achieve in order to sustain their competitive edge? Under what conditions can this knowledge enhance strategic agility?

1. Introduction

Among the most critical challenges in business is creating strategy for the future — particularly in the case of an organization that is doing well. How do we know what we have to do next? In many cases this question is not asked or answered, being the course simply maintained until a threat or an opportunity crashes into the organization. However, in recent years the fast pace of new events and changes have considerably increased the volatility and complexity of the business environment (Grant, 2003). In a chaotic world in which markets and entire industries continuously emerge, collide, split, evolve, and decline, one of the primary determinants of success is the ability of the firm to cope with uncertainty, by enhancing its resilience and adaptation to the changing environment (Teece, 2007; Sheffi, 2005).

The challenge of coping with growing environmental uncertainty encouraged reconsideration of both the processes and nature of strategic decision making, including various practices and techniques which today are commonly used in a wide set of industries. Scholars developed tools for managing uncertainty at the level of innovation projects (Chapman and Ward, 1996; De Meyer et al., 2002), capital budgeting and capital structure policies (Bromiley, 1986; Graham and Harvey, 2001; Leland, 1998). More generally, scholars investigated the future-oriented techniques that might be used for enhancing decision-making at the level of business and corporate strategy (Porter et al., 2004). Some of the most popular techniques are environmental scanning, product and technology roadmaps, scenarios and real options. Environmental scanning concerns the detection of new events and drivers of change (Day and Shoemaker, 2006; Hambrick, 1982). Roadmaps consist of representations of interconnected nodes of major changes and events in selected fields, i.e. science, technologies, markets and products. The connecting links between nodes are the roadmaps themselves, illustrating their causal and temporal inter-relationships (Kostoff et al., 2004). Scenarios are focused descriptions of fundamentally different paths, presented in a script-like or narrative fashion, which tell coherent and credible stories leading to alternative futures (Fahey and Randall, 1998; Schwartz, 1991; Jefferson, 2012). Real options involve the application of financial options theory to investment decisions on real assets: the approach emphasizes that many initial investments (for example market tests, joint

E-mail address: R.Vecchiato@kingston.ac.uk.
[1] Tel.: +44 (0)20 8417 5425.

http://dx.doi.org/10.1016/j.techfore.2014.08.016
0040-1625/

Please cite this article as: Vecchiato, R., Creating value through foresight: First mover advantages and strategic agility, Technol. Forecast. Soc. Change (2014), http://dx.doi.org/10.1016/j.techfore.2014.08.016

ventures, or operating licenses) create relevant opportunities that give the firm the chance (but not the obligation) to make subsequent follow-on investments (Dixit and Pindyck, 1994; Trigeorgis, 1996; Amram and Kulatilaka, 1999).

A survey of the US companies revealed that by the 80s almost half of the US Fortune 1000 industrial companies were using future-oriented techniques for supporting their planning processes (Linneman and Klein, 1983); a similar pattern was followed by European firms (Malaska, 1985). More recently, scholars have documented that many large firms in such diverse sectors as energy, automotive, telecommunications, and information technology have been regularly applying future-oriented techniques (Becker, 2002; Blind et al., 1999; Rohrbeck et al., 2009; Battistella, forthcoming). This wide interest seems to be confirmed by the growing number of consulting companies and networks in the field: relevant examples are GBN (Global Business Network) in the United States and EIRMA (European Industrial Research Management Association) in the European Union.

In this context, the term 'strategic foresight' (or alternatively, 'corporate foresight') has now become widely used to encompass the activities that help decision makers in the task of sustaining the company's future growth and success (Bradley MacKay and Costanzo, 2009; Coates et al., 2010). In particular, according to mainstream scholars in the field, we define strategic foresight as the set of techniques, practices and processes that organizations use for: detecting new events and changes in their external environment; exploring their likely evolution and effects; and defining response options (Rohrbeck and Gemünden, 2011; Vecchiato and Roveda, 2010a; Vecchiato, 2012a). A key feature of strategic foresight is the premise that the future is neither predictable nor predetermined, but it might be influenced by the present choices of the organization and other relevant players in its business (Martin, 1995). Strategic foresight thus tries to envisage alternative futures, by strongly differentiating from previous future-oriented approaches like forecasting — i.e. the process of making accurate statements about future events (Jantsch, 1967). (The term 'prediction' is also used with a similar meaning. However, forecasts tend to be more accurate statements of future events — e.g.: "sales of smartphones will be 1.5 billion in 2015" — whereas predictions are more general — e.g.: "sales of smartphones will continue to grow in the next few years".)

On the other hand, despite the widespread diffusion of strategic foresight in corporate organizations, some skepticism arose in the academic community about the effectiveness of its contribution to long term performances (Bradley MacKay and Costanzo, 2009; Grant, 2003; Wiltbank et al., 2006). The major evidence of this skepticism may be the fact that today, apart from a few exceptions, there are a limited number of primary academic journals that regularly host papers addressing this research field. It is worth noting as well that foresight techniques are not specifically addressed by most MBA curricula: many managers in charge of strategic foresight activities in prominent companies pointed out to us that they had great difficulty in finding and recruiting the skills they required among MBA and PhD graduates.

Increasing criticism about the effectiveness of corporate foresight has emphasized the impossibility of making reliable enough visions of the future: while relatively accurate in the short term, foresight accuracy diminishes in the medium and long term as political, economic, social and technological drivers of change interact in novel and unforeseeable ways (Galbraith and Merrill, 1996). Hamel (2000) supported the idea that the best way to handle an uncertain future is simply to ignore it; Drucker (1992: p. 98) claimed that "prediction is not a worthwhile managerial activity".

Scholars and practitioners in the field of strategic foresight responded to such growing criticism by arguing that its role is not actually to anticipate the future as "it exactly will be", but to prepare the organization for future challenges. Corporate foresight would set the stage for a learning process that fosters the flexibility and strategic agility of the organization, i.e. its capability to respond to changes in the external environment (Grant, 2003; De Geus, 1997). In particular, as he studied several corporate organizations, Vecchiato (2012b) introduced the concept of 'planned learning' to outline the likely value of foresight activities and the kind of benefits organizations pursue through foresight efforts. However, he did not investigate under which conditions firms might concretely create this value, i.e. what are the essential mechanisms that enable this process of 'planned learning' to occur. Thus there is the need to fill a gap in literature on strategy and to develop a more complete and theoretically rich understanding of corporate foresight and the long-term value it might bring in dynamic environments. In this paper we focus exactly on this issue; we ask: *whether and under what circumstances does corporate foresight enhance the strategic agility of the organization*?

In order to investigate our research questions, we draw from three different research streams: the first one is literature on environmental uncertainty, a concept which we carefully re-examine in this paper; the second one is literature on strategic planning and first mover advantages; and the third one is literature on organizational learning and organizational memories. Two fundamental issues characterize the interaction between environmental uncertainty, strategic foresight, and the long term performance of the firm: the first, regards what kind of knowledge (i.e., 'memory' of the future) organizations should build through foresight; and the second, regards under what conditions this knowledge might bring to superior learning and adaptive skills.

Although this article is theoretical in nature, its insights are significantly based on empirical findings. We have been involved in the past ten years in the investigation of foresight practices in several leading firms of different industries (ICT, automotive, energy, home appliances).

The contribution of this paper is twofold. Building on previous work of scholars (Vecchiato, 2012b), first we emphasize that the value of strategic foresight lies not just in the alternative visions of the future it provides, but actually in how it fosters a process of 'planned learning' about external changes. This research thus adds to our knowledge in the field by exploring and shedding light on the key requisites for this 'planned learning' process. Second, this paper develops a research agenda that may lead to further theoretical and empirical work on the nature and effects of strategic foresight activities and their role in the future growth of the firm. It links the work on strategic foresight with other research streams (i.e., dynamic capabilities and strategic agility, organizational learning and organizational memory) which are enjoying growing popularity in literature on management, thus revealing new connections and issues to explore.

Please cite this article as: Vecchiato, R., Creating value through foresight: First mover advantages and strategic agility, Technol. Forecast. Soc. Change (2014), http://dx.doi.org/10.1016/j.techfore.2014.08.016