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**A chance to stretch your legs: organizational capabilities and new
business opportunities**

Leticia Antunes Nogueira
Aalborg University
Department of Business and Management
lan@business.aau.dk

Abstract

This paper presents an exploratory historical case study of a firm in and their endeavors of new opportunity seeking. The central theme is the role of organizational capabilities in this process. Empirical focus is the context of a sub-supplier diversifying to offshore wind.

1. Introduction

In a context of change, innovation and entrepreneurship, organizational capabilities are more often than not associated with resistance and hindrances. Literature on strategic entrepreneurship has conceptualized organizational capabilities as disabling change (e.g. Birkinshaw & Ridderstråle, 1999; Christensen, 1997; Christensen & Raynor, 2003; Leonard-Barton, 1992).

This is because organizational capabilities are primarily concerned with recurrent activities in the existing business of a company, and efficiency seeking. In other words, organizational capabilities are stability enhancing. In this perspective, it is the very advantage that capabilities confer to business that compromises its ability to change and reinvent themselves (Christensen, 1997; Christensen & Raynor, 2003; Leonard-Barton, 1992) - a crucial ability for long-term survival and success. The combination of the self-reinforcing nature of business exploitation (March, 1991), the predominant inertia of organizations (e.g. Birkinshaw & Ridderstråle, 1999), and its fundamental value-system leads to the formation of core rigidities that prevent firms from pursuing different directions (Leonard-Barton, 1992). As a result, new opportunity seeking is seen as depending on letting go of the old, as it stifles the organizations ability to act.

The idea of organizations acting towards change is a key concept here. In the age old question of the struggle between structure and agency that permeates social sciences, literature on strategic innovation and entrepreneurship has favoured the understanding of the role of agency. As a consequence, elements of structure, such as organizational capabilities, have been underexplored. Because capabilities have been seen as uncondusive to change, theory has not sufficiently dealt with their role, besides overcoming the potential hindrances they may cause. The actual role of organizational capabilities in process of new opportunity seeking lacks understanding.

The purpose of this paper is to investigate how organizational capabilities influence firms seeking new opportunities, and how capabilities interplay with elements of agency in this process. Therefore, the research question that guides this paper is: how do organizational capabilities influence firms' process of new opportunity seeking?

An interesting context to investigate such issues is, for instance, the emergence of offshore wind, and its development as a separate branch from the wind power market (Andersen, Drejer, & Gjerding, 2014). This was a market that emerged somewhat rapidly, and attracted entrants from diverse backgrounds. Building wind parks offshore poses a number of challenges. One of which is that not many firms have the necessary capabilities for placing a wind turbine offshore, and performing all the activities associated with it. This dynamics generates entrepreneurial opportunities for firms throughout the supply chain. Such opportunities have attracted firms from different sectors and with diverse capabilities, aiming at diversifying their businesses, and guaranteeing their place in renewables. Several actors in offshore wind have had previous experience in different sectors, which indicates they have made use of existing capabilities in proposing solutions for offshore wind applications.

With this background, this paper explores the process of new opportunity seeking of a company in offshore wind, in light of the role of organizational capabilities and the challenges brought about by

diversifying into a new market. This paper presents a single historical case study conducted with a Danish company active in this business. The case shows the process of change in the organization, which led them to seek new opportunities, and the interplay between capabilities and the agency of management in this process.

Investigating organizational capabilities and new opportunity seeking is relevant because capabilities play an important role not only in current performance, but also future options for action (Dosi, Nelson, & Winter, 2001; Farjoun, 2010; Helfat & Lieberman, 2002; Teece, 2007). Moreover, the key to generating newness of various kinds relies on the *recombination* of existing and new knowledge, resources and capabilities (Schumpeter, 1934).

This paper is structured as follows. Next section presents brief review concerning organizational capabilities and strategic entrepreneurship. After, the methods and data are discussed. Then, the empirical context of the wind power industry is presented, with special regard to the emergence of offshore wind. Following, the case study is presented and discussed. Finally, I conclude with a discussion of the main implications of the present paper.

2. Organizational capabilities: A brief review

The notion of organizational capabilities came about in the late 1990s when Teece and colleagues (Teece, Pisano, & Shuen, 1997) wrote about dynamic capabilities, building upon evolutionary economics and the resource-based view (Helfat & Peteraf, 2003; Helfat, 2007; Helfat & Peteraf, 2009).

A capability is defined here as *“the ability of an organization to perform a coordinated set of tasks, utilizing organizational resources, for the purpose of achieving a particular end result”* (Helfat & Peteraf, 2003, p. 999). Capabilities are context-dependent, and are embedded on collective tacit knowledge of the organization, together with more formal explicit structures. A firm can be said to have a capability when it can reliably carry out a given activity at a minimally satisfactory level (Helfat & Winter, 2011). In other words, they follow satisficing logic, instead of maximizing logic (Winter, 2000). Generally, capabilities are high-level routines. They interact with the firm’s resource base in order to fulfil its purpose. A firm’s body of knowledge, its employees, facilities and equipment etc. are part of its resource-base. They are necessary for the firm to realize the capabilities, but are not part of the capability per se.

Scholars in this field typically distinguish between ordinary and dynamic capabilities. Ordinary capabilities are concerned with the existing business of the firm, or in the words of Sidney Winter, *“how we earn a living now”* (2003, p. 992). Ordinary capabilities relate to efficiency-seeking processes, and can be related to best practices (Teece, 2014); they cannot account for sustainable competitive advantage (Eisenhardt & Martin, 2000). Dynamic capabilities, on the other hand, are concerned with sustained competitive advantage, both in a context of adaptive as well as purposeful change (Helfat & Peteraf, 2009; Teece, 2014). Although definitions have evolved and been subject to much debate, currently, a commonly accepted understanding of dynamic capabilities is *“the capacity of an organization to purposefully create, extend, or modify its resource base”* (Helfat, 2007 - emphasis added). Three archetypes, known as microfoundations, arrange different dynamic capabilities in the groups: sensing, seizing and transforming activities (Teece, 2007).

Teece summarizes the difference between ordinary and dynamic capabilities by claiming that the first is about “*doing the things right*”, while the latter is about “*doing the right things*” (2014). While this is a straightforward distinction, in practice, it is difficult to draw a line dividing them. Scholars have not so far agreed to what the domain of each term should be. In the early days, ordinary and dynamic capabilities were perceived as discrete categories, however, it is advisable to perceive them as a continuum instead (Helfat & Winter, 2011). In any case, the distinction is conceptually useful, provided that nuances are respected and accounted for in empirical research.

A third central concept in this discussion is that of entrepreneurial action. This is analogous to what Winter calls ad hoc problem solving (Winter, 2003)¹. The central idea here is that dynamic capabilities are but one alternative to change. Not all Firms need to invest in developing dynamic capabilities for surviving competitive environments. And not all firms can afford to do so (Teece, 2012; Winter, 2003). The notion of capability involves systematic repeated action, and therefore, in order to build a dynamic capability, time, effort and resources need to be directed to a particular aim. For some firms, especially smaller ones, change can be approached by (non-systematic). This means that by using ad hoc action, decisions are made on a one-time basis and do not rely on any systematic pattern. In both dynamic capabilities and ad hoc activity, entrepreneurial management is involved.

Change by means of both dynamic capabilities or entrepreneurial action will result in changes that organizations need to deal with, whether these are proactive or reactive. These are by definition associated to the uncertain and the unknown. Previous studies have shown that firms rely on what is familiar when making strategic decisions for change (Dew, Sarasvathy, & Venkataraman, 2004; Helfat & Lieberman, 2002; Tripsas & Gavetti, 2000). This paper aims at understanding the role of existing organizational capabilities in processes of new opportunity seeking.

New opportunity seeking is conceptualized here as encompassing all phases from the search of viable alternatives, to the actual implementation of the strategic plan, or the seizing of the opportunity.

What is puzzling here is that the relationship between ordinary and dynamic capabilities is ambiguous. At the same time that dynamic capabilities have the purpose of reconfiguring ordinary ones, ordinary capabilities shape possible courses of future action through mechanisms of bounded rationality, path dependences, and imprinted characteristics (Araujo & Harrison, 2002; Levinthal, 2006; Marquis & Tilcsik, 2013). Ordinary capabilities, and the degree of excellence with which the firm can perform them, affect how managers perceive or create opportunities, as well as make decisions in regards to which opportunities they will address. Moreover, because of sticky resource bundles, and in a context of Schumpeterian competition, firms are required to look first at their resource endowment before making strategic choices (Teece et al., 1997). This matters both for changes brought about by dynamic capabilities and by entrepreneurial action. This is not to say that the organization is inert or powerless towards fate (Levinthal, 2006). Nevertheless, the role of structural elements needs to be acknowledged. Much of the research in strategic entrepreneurship has favored the role of agency (Garud & Karnøe, 2003) at the expense of structure, which has been better investigated by scholars in the technology domain (Araujo & Harrison, 2002). This paper aims

¹ The term entrepreneurial action is preferred here, as I relate to the literature on strategic entrepreneurship.

at filling this gap, and understanding how elements of structure and agency interact in the process of new opportunity seeking.

3. Methods and data

This paper consists of an in-depth historical case study of a company that sought new business opportunities with the emergence of the offshore wind industry in Denmark. Because of the nature of the research question, and the research design adopted, this paper is concerned with theory-building in relation to the literature of strategic entrepreneurship.

This study takes departure in a critical realist philosophical paradigm. This implies that the context matters for building explanations, which are context specific and can be generalized only in a transfactual perspective (Collier, 1994). In line with the critical realist philosophy, this case employs a process-based design. Therefore, the central effort has been on mapping the historical key events in the company, with a particular emphasis at the time the firm engaged with the new business opportunity in offshore wind.

The case company being investigated in this paper can be seen as a typical case in the context of offshore wind². Although firms entering this industry are diverse in terms of their characteristics, competences and activities in the value chain, it was ordinary that firms migrated from different businesses. Many of the firms that engaged in this business, especially in the early 2000s, had previous businesses on onshore wind, offshore oil & gas, shipyard and maritime and other related activities. Therefore, this single-case design is adequate for revealing typical causal mechanisms between events in an organization seeking new business opportunities (Yin, 2009). In addition, concrete case knowledge is valuable in itself, and lessons learnt from typical cases can be usefully transferred to other cases (Flyvbjerg, 2011).

The basic approach adopted in this paper is a process research design. Process studies are fundamental for gaining an appreciation of dynamic social life, and for both developing and testing theories of 'how' social entities adapt, change and evolve over time (Van de Ven, 2007). This is important to mention because process-based research contrasts with traditional variance-based models, which are concerned with 'what' questions, and the relationship between independent and dependent variables, in an outcome-driven perspective. In contrast, process-based models are concerned with 'how' questions, and the emergence and development of events over time. In process research, narratives are central, and explanations are event-driven. Events correspond to activities performed by the subjects, or happenings that affect them.

The data for this paper is composed of archival records of the company history, such as reports, financial statements, product fact-sheets, company website and newspaper articles. Data from one interview with the company is available, as well as data with one former employee, current working in a partner company, and data from two interviews with people working in a former associated

² While the case company is a typical case in offshore wind, the context of offshore wind itself and its emergence as a separate industry from traditional onshore wind (Andersen et al., 2014) is a unique case. The emergence of a new industry does not happen ordinarily, and when it does, it is usually only acknowledged in hindsight. Despite industry evolution not being the focus of this paper, it is an important contextual force shaping the events that influence the firm.

firm. As this is a work in progress, more data is necessary to: (i) confirm the relationships and explanations suggested here, (ii) clarify in more detail some of the events that have been mapped so far, as well as (iii) uncover events that are still not known. Therefore, more interviews with pertinent actors are planned in a near future.

The data collected in this work is analyzed by employing a combination of strategies, namely: narratives, visual mapping strategy, temporal bracketing strategy (Langley, 1999). Narratives are well known to case study research. They deal with stories, descriptions, meanings and mechanisms. This was the first strategy employed to make sense of the data. Next, in order to go deeper in the case, data is organized in a visual map, which is appropriate to deal with events, orderings and relationships, and enables patterns to emerge (Langley, 1999). Finally, temporal bracketing strategy was employed to deal with phases and uncover mechanisms underneath relationships (Langley, 1999). By organizing events in a temporal structure consisting of phases, data can be organized in connected blocks, and enable analysis of how actions and events in one period are connected to other periods (Langley, 1999). Both the periods in the temporal dimension and the dimensions analyzed in the visual strategy mapping are important for the narrative description of the case, and therefore all three strategies are intertwined.

Throughout the historical case study, the different phases are temporally asymmetrical and emerge inductively from the data. More emphasis is given to the process of new opportunity seeking in offshore wind. Conversely, the dimensions of analysis are grounded in the interplay between theory and data. At the same time that theory guides what is interesting to explore, data informs what the case offers that is remarkable and curious to notice in this context. The dimensions analyzed in this paper are framed as: (i) the context of the business areas the firm is engaged with, i.e. external dynamics; and (ii) the organizational capabilities.

Before introducing the case, I present a brief portrayal of the empirical context of the wind industry, with especial focus on offshore wind. Contextual knowledge of the industry is essential for positioning the case, the opportunities the firm identified and decided to pursue, as well as the challenges associated with them.

4. Empirical context: The wind power industry and offshore wind

Whereas there is now much excitement globally about wind power as a renewable and viable source of energy, Denmark has been in the forefront in the development of this sector. The first designs of modern wind turbines can be traced back to the 1950s, but it was in the 1970s that the industry actually emerged (Garud & Karnøe, 2003). This was a time of unemployment, economic instability, social movements and the oil crisis.

The Danish government saw nuclear power as the preferred alternative to the energy crisis, but strong popular resistance against it, combined with other social movements that supported a decentralized social organization, paved the way for the birth of the wind industry (Andersen & Drejer, 2008; Andersen et al., 2014). Therefore, at the beginning, wind power was driven by grassroot enthusiasts (Andersen et al., 2014; Lema, Nordensvärd, Urban, & Lütkenhorst, 2014).

This changed in 1979, as the Danish government launched incentives that supported the construction of wind turbines (Andersen et al., 2014). In this context, the Danish wind industry emerged with firms operating in stagnating markets diversified its activities into the production of wind turbines and its supplies (Andersen & Drejer, 2008). The approach towards competence building was characterized by bricolage, in the sense that it was characterized by experimentation and collaboration, more than formal R&D (Garud & Karnøe, 2003). Firms used their capabilities for design and manufacturing of wind turbines akin to the way they did in their previous business activities. For example, Vestas, who had previously been in the agricultural machinery business, perceived the challenges of building wind turbines as similar to the ones of building agricultural machinery (Garud & Karnøe, 2003). In the decades that followed, research institutions and universities added to the development of the technology and training the labor force in the field, supporting the industry. In addition, there was a consolidation of the sector with several mergers and acquisitions (Lema et al., 2014).

In the 2000s the industry entered a globalization stage, and the Danish firms that originated from the consolidation phase were competing on a global scale, at the same time that and foreign firms had entered Denmark (Andersen & Drejer, 2008; Lema et al., 2014).

In regards to the role of policy in supporting the industry, after decades of direct support, in 2001 the government introduced market-based mechanisms for incentivizing the adoption of wind power (Lema et al., 2014). Moreover, the energy market became liberalized throughout the EU, which contributed further to the end of subsidies to the Danish industry (Andersen & Drejer, 2008; Lema et al., 2014). This changed the relationship between firms active in wind power and the public sector. Only in the 2010s the Danish government returned to support wind power more consistently.

Much technological advancement was made in wind power technology throughout its development. One that deserves special mentioning is the placement of turbines offshore, which offers several advantages in comparison to onshore. Offshore wind farms benefit from better wind resources, the possibility of installing larger wind turbines that yield greater energy per unit installed, less resistance from the population to the turbine's noise and shadows to name a few. Nonetheless, there are also challenges involved. The high costs of installation and maintenance, the logistics associated with an offshore wind park, and the little known conditions of the sea are some prominent ones.

The first offshore park was Vindeby, in Denmark, in 1991 (Andersen et al., 2014). However, it was only in the early 2000s that more projects came about³. Even though the first is offshore wind farm was built over 20 years ago, this is still a recent development, as the sector started to develop and diffuse only about a decade ago. Offshore wind is a field in which not many firms possess expert capabilities in. It is still a business of the North Sea. Danish firms, as first-movers, have been ahead (DWIA, 2014), even though other countries have now invested significantly, such as the UK, and Germany (Lema et al., 2014).

³ Horns rev I (2002) with 160 MW, plus four different projects in 2003, summing up to 212 MW (Petersen & Thordahl, 2014).

The newness of offshore wind represents a break from the dynamics of traditional onshore wind (Andersen et al., 2014). The knowledge and capabilities required differ, as offshore wind has developed special characteristics, both technical and otherwise, that made it independent from the original onshore market (Andersen et al., 2014). The most prominent differentiation concerns the size of the turbines, which is by no means a trivial difference; it reflects throughout the value chain, for example in design, choice of material, transport and logistics, type of foundation, technique for installation, operation and maintenance, transmission of energy etc. (Andersen et al., 2014; Lema et al., 2014).

Such challenges presented by offshore wind represent entrepreneurial opportunities for a variety of firms with diverse capabilities, which could, in principle, be transferred to the offshore wind context and help solve some of these new problems. These opportunities attracted firms that had operations in different sectors to diversify their businesses.

In conclusion, understanding the dynamics of business opportunities in offshore wind, and the way firms have dealt with them is important for several reasons. First, addressing this issue is essential for achieving the energy goals proposed by policy makers. Second, it is in the interest of the industry to bring offshore wind to the mainstream of the energy market across the world. Third, this recent industry emergence offers a unique empirical scenario for investigating the pursuit of entrepreneurial opportunities, and how firms make use of their existing capabilities in that process.

The remainder of this paper will not be presented here due to potential questions of confidentiality concerning the case, which is still being developed. The full paper will be sent to the discussants directly. In case of interest in this paper, please contact the author.