Disentangling the antecedents of ambidexterity: Exploration and exploitation

Oksana Koryak⁎, Andy Lockett, James Hayton, Nicos Nicolaou, Kevin Mole

⁎ Bettany Centre for Entrepreneurship, Cranfield School of Management, Cranfield University, MK43 0AL, UK
b Enterprise Research Centre and Warwick Business School, The University of Warwick, Coventry, CV4 7AL, UK

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ABSTRACT

We view ambidexterity as a paradox whereby its components, exploration and exploitation, generate persistent and conflicting demands on an organization. Drawing on the attention based view of the firm (ABV), we examine three antecedents of organizational ambidexterity that reflect ABV’s three principles — the principle of focus of attention; the principle of situated attention; and the principle of structural distribution of attention. Specifically, we examine the influence of top management team (TMT) composition, whether or not the firm has a clear written vision, and the extent to which organizational attention is focused on investments in R&D, and continuous improvement. We empirically validate our model on a sample of 422 small and medium-sized enterprises in the UK and find that ambidexterity is supported by a blend of integration and differentiation approaches.

1. Introduction

Organizational ambidexterity has been a subject of enduring interest to management scholars. Ambidexterity refers to an organization’s ability to manage current demands while being adaptable to changes in the environment (Duncan, 1976; Gibson and Birkinshaw, 2004; Tushman and O’Reilly, 1996). It has long been recognized that firms should “engage in enough exploitation to ensure the organization’s current viability and engage in enough exploration to ensure its future viability” (Levinthal and March 1993, p. 105). Indeed, organizational ambidexterity has been linked to technological innovation, organizational learning, competitive advantage and organizational survival (Benner and Tushman, 2003; Siggelkow and Levinthal, 2003).

A key research stream in scholarship on ambidexterity has examined the antecedents of ambidexterity and their interactions (Auh and Menguc, 2005; Jansen et al., 2006). The antecedents of ambidexterity are interesting to scholars because of the challenge of developing a capability with two underlying components, exploration and exploitation, which emerge from distinct knowledge processing capabilities (Baum et al., 2000; Floyd and Lane, 2000).

Recent research into ambidexterity recognises that exploration and exploitation form a paradoxical relationship (Andriopoulos and Lewis, 2010; Raisch and Zimmermann, 2017; Smith and Lewis, 2011) as they require substantially different structures, processes, strategies and capabilities (Benner and Tushman, 2003; Chang et al., 2009; McGrath, 2001; Siggelkow and Levinthal, 2003). Although exploration and exploitation are complementary forces which tend to be mutually reinforcing when they co-occur over time (Raisch et al., 2009), they also generate persistent organizational tensions (Labatkin et al., 2006; Smith and Lewis, 2011).

The paradox view of ambidexterity suggests that the persistent tensions arising from the contradictory nature of the components of ambidexterity are difficult to resolve (Andriopoulos and Lewis, 2009). Instead, such tensions need to be addressed through various integrative and differentiating approaches (Andriopoulos and Lewis, 2009; Gotsi et al., 2010; Smith, 2015). Integrative approaches stress interdependence between seemingly contradictory activities and call for coordination (Andriopoulos and Lewis, 2009) and synergies (Lewis, 2000) while differentiating approaches direct attention to either explorative or exploitative aspects of organizational activities (Puranam et al., 2006; Tushman and O’Reilly, 1996).

In this paper, we build on previous ambidexterity-as-a-paradox research by exploring which antecedents of exploration and exploitation tend to be integrative or differentiating. In so doing, we attempt to

⁎ Corresponding author.
E-mail address: oksana.koryak@cranfield.ac.uk (O. Koryak).
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reconcile the fact that while some common antecedents of ambidexterity as an overarching construct have been identified (see Raisch and Birkinshaw, 2008 for review), its constituent components – exploration and exploitation – tend to be associated with diametrically opposing factors. Indeed, exploration has long been associated with organic structures, improvisation and autonomy (Rosenkopf and Nerkar, 2001); whereas exploitation has been associated with mechanistic structures, path dependence and routinization (Beckman et al., 2004; Benner and Tushman, 2003; March 1991).

We posit that managing ambidexterity and engaging in the right combination of exploitation and exploration activities requires dynamically shifting between the two practices by adopting an organizational paradox mindset (cf. Miron-Spektor et al., 2017). Adopting an organizational paradox mindset predicated on constant readjustment between the tension-generating extremes, necessitates a better understanding of the antecedents of the components of ambidexterity – exploration and exploitation. More specifically, identification of which antecedents are integrating and which are differentiating would help firms devise better strategies for dealing with ambidexterity.

Drawing on the attention based view (Ocasio, 1997, 2011) and cognitive approaches to strategic management (Gavetti and Levinthal, 2000), we view the development of explorative and exploitative capability as a consequence of the focus of managerial attention. Attention denotes “noticing, interpreting, and focusing of time and effort” (Ocasio, 1997, p.188). We examine three antecedent factors that reflect the three key principles of the attention-based view (Ocasio, 1997): the principle of focus of attention; the principle of situated attention; and the principle of structural distribution of attention. Specifically, we examine the influence of top management team (TMT) composition in terms of heterogeneity and size (Alexiev et al., 2010; Nielsen and Nielsen, 2013; Nielsen, 2010), whether or not the firm has a clear written vision (Jansen et al., 2008; Pearce and Ennsley, 2004), and the extent to which organizational attention is focused on investments in R&D and continuous improvement.

Our study makes several contributions to the literature. First, our paper shows that ambidexterity can be achieved through a combination of differentiating and integrating approaches to managing ambidexterity. Contrary to expectations, we find that continuous improvement capability is integrative, while written vision, TMT heterogeneity and size, and R&D intensity are differentiating. Second, our paper contributes to the theoretical development of ambidexterity by examining the impact of managerial attention on exploration and exploitation. In so doing, we address a call by Yukl (2009) for more comprehensive models of the impact of leadership on exploration and exploitation. Third, we contribute to the discussion of how team composition and vision impact exploration and exploitation. Most prior studies that have linked organizational ambidexterity with team composition have examined TMT characteristics, such as heterogeneity (Mannix and Neale, 2005; Mueller, 2012) and group size (Haleblian and Finkelstein, 1993; Jackson et al., 1991), on their own and not interactively. The interactive effect of different TMT characteristics may illustrate how these characteristics support and reinforce each other. Any studies that have considered a combination of the two factors were done in a fairly specific context – that of research collaborations (e.g. Chompalov et al., 2002; Cummings et al., 2013) where characteristics might have influenced the outcomes. Likewise, although agreed vision has received scholarly attention, it has not been systematically examined in relation to organizational ambidexterity and its components. Conceptualizing vision as a mechanism that shapes the way a firm responds to its changing context facilitates a better understanding of a firm’s efforts to achieve ambidexterity.

Examining the potentially differential effects of key antecedents to ambidexterity on exploration and exploitation highlights the tensions and trade-offs that form a part of managing ambidexterity in organizations. As organizational ambidexterity may imply a differential focus on exploration and exploitation activities in line with the firm’s strategic priorities, a clearer understanding of the role played by each antecedent in fostering exploration and exploitation capabilities would enable firms to make more informed decisions with regards to managing their innovation and strategic decision-making process.

2. Theoretical development

The capability of ambidexterity has long been linked to firms’ short-run and long-run performance (Gibson and Birkinshaw, 2004; He and Wong, 2004; Lubatkin et al., 2006). The difficulty of developing a capability for organizational ambidexterity originates in the fact that exploration and exploitation stem from different learning capabilities (Baum et al., 2000; Floyd and Lane, 2000). Indeed, “exploitation refers to learning gained via local search, experiential refinement, and selection and reuse of existing routines. Exploration refers to learning gained through processes of concerted variation, planned experimentation, and play” (Baum et al., 2000, p. 768). Exploration and exploitation also place different requirements on organizations in terms of organizational structure and processes (Gibson and Birkinshaw, 2004; Tushman et al., 2010; Tushman and O’Reilly, 1996). Traditionally, scholars have recommended focusing on either exploration or exploitation (Barney, 1991; Porter, 1985) so as to avoid the risk of being mediocre at both (March 1991); although subsequently, the notion of balancing these two types of activities to ensure superior performance has gained greater recognition (Gibson and Birkinshaw, 2004; O’Reilly and Tushman, 2013; Raisch and Birkinshaw, 2008).

Despite the ongoing debate on the appropriate way to balance exploration and exploitation, and the realization that these two activities are conceptually distinct, most studies have not explicitly disentangled the common and distinct antecedents of exploration and exploitation. A notable exception is the work of Beckman (2006) who focused on the impact of the top management team members’ prior company affiliations on the firm explorative and exploitative behaviors. In this paper we follow the lead of Beckman (2006) and argue that there is a need for a closer and more systematic examination of antecedents of exploration and exploitation.

A more recent conceptualization of ambidexterity as a paradox (Jansen, 2008; Lewis, 2000; Papachroni et al., 2014) characterized by persistent tensions (Andriopoulos and Lewis, 2009) calls for a dynamic management of exploration-exploitation tensions (Smith, 2015). A paradox involves “contradictory yet interrelated elements that exist simultaneously and persist over time” (Smith & Lewis, 2011, p. 382). One mechanism of managing a paradox in the context of ambidexterity that has begun receiving scholarly attention is a combination of integration and differentiation approaches (Smith, 2015). According to Smith and Tushman (2005), differentiating involves separating distinct elements and cultivating unique aspects of each, while integrating emphasises synergies and linkages. Differentiation and integration could be seen in organizational designs (Tushman and O’Reilly, 1996) and organizational practices (Andriopoulos and Lewis, 2009; Locke and Latham, 1990; Smith and Tushman, 2005).

We address the gap of unpicking distinct and common antecedents of exploitation and exploration by examining some key leadership-based and contextual antecedents of ambidexterity, namely, TMT composition (heterogeneity and size), the existence of a written vision, and the learning and innovation activities of continuous improvement and R&D. Our rationale for selecting these three variables is found in the attention-based view (ABV) of the firm and the managerial cognition literature.

The ABV (Ocasio, 1997) builds upon the foundations of the behavioral theory of the firm (Cyert and March, 1963), which holds that bounded rationality leads to the creation of organizational structures and processes that both shape and are shaped by these human cognitive limitations. The ABV advances this perspective to address how attention influences organizational adaptation (Ocasio, 2011). Here we focus on two aspects of attention: attentional perspective and attentional...
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