

EDITORIAL

## Dynamic capabilities: A retrospective, state-of-the-art, and future research agenda

This inaugural virtual special issue features a topic that has attracted much attention. Dynamic capabilities have captured an increasing interest since the 1990s under labels such as distinctive capabilities (Selznick, 1957; Day, 1994), combinative capabilities (Kogut & Zander, 1992), or dynamic capabilities (Teece & Pisano, 1994). Even today, the seminal paper on dynamic capabilities by Teece, Pisano, and Shuen (1997) is the most cited paper in management, and the number of annual publications relating to this topic remains on top levels.

Since the beginnings of the framework 20 years ago, research on dynamic capabilities has been intricately intertwined with debates about its conceptualization, its measurement, and its outcomes (Barreto, 2010). In addition, more recently, it has become apparent that there are at least two partially conflicting conceptualizations of dynamic capabilities that have led to a conflated debate (DiStefano et al., 2010; Peteraf et al., 2013; Arndt & Pierce, 2018). Despite these difficulties, much progress has been made and some demands on new and longitudinal research settings have been triggered by the endeavour to better grasp dynamic capabilities.

In this special virtual issue, we showcase articles that tackle many of those issues (O'Shannassy, 2017). Noteworthy, our opening article features new work by Teece (2018) that explains how system theory has inspired his thinking of dynamic capabilities and how it is intricately intertwined in the way he thinks about dynamic capabilities. Two articles discuss the conceptual divide between the version of dynamic capabilities by Teece, Pisano, Shuen, and the one by Eisenhardt and Martin (Galvin, Rice, & Liao, 2014; Arndt & Bach, 2015). Another article takes a mindfulness perspective that enriches the debate on theoretical foundations of dynamic capabilities by tackling the ubiquitous conflict between routinization and exploration inherent in the concept (Schreyoegg & Kliesch-Eberl, 2007).

Another chunk of articles looks at contextualized settings and specific dynamic capabilities. Three of our featured articles look at contextual factors and underlying mechanisms of dynamic capabilities and its antecedents (Lu & Fang, 2013; Frigotto & Zamarian, 2015; Deng, Liu, Gallagher, & Wu, 2018). Another three articles look particularly at the role of networks in the context of dynamically capable organizations (Agarwal & Selen, 2013; Lee & Yang, 2014; Zou, Guo, & Guo, 2017). Noteworthy, most of these studies utilize emerging markets to look at empirical evidence for their arguments. Finally, two articles analyse the role of dynamic capabilities in different lifecycle stages and their performance implications (Lehmborg, 2017; Zhou, Zhou, Feng, & Jiang, 2017).

### Alternating the foundations of dynamic capabilities

Little progress will be made in developing our understanding of dynamic capabilities if empirical studies do not pay attention to the intricacies that the Eisenhardt and Martin (2000) and Teece, Pisano, and Shuen (1997) divide have brought to light. Next to the stronger emphasis on behavioral respectively evolutionary roots outcome measures may contribute to inform this debate. Some discussion has already taken place earlier when scholars tried to

identify some of the implications of the concept in different fields (Zahra, Sapienza, & Davidsson, 2006; Peteraf et al, 2009; Barreto, 2010). However, these initial discussions have not taken into account the differential nature of dynamic capabilities, but rather tried to grasp the concept indistinctively. Accordingly, no consensus has been reached. The featured article of Galvin et al. (2014) addresses exactly this debate and tries to implement a new idea for measuring dynamic capabilities longitudinally. The study motivated by ecological thinking makes an interesting argument that utilizes firm survival as an outcome measure. Arndt and Bach (2015) add to this line of thinking by showing how the authors could have taken the argument even further by suggesting a path forward how such an inquiry may inform behavioural and evolutionary aspects of dynamic capabilities. Future research may benefit from leveraging the differences between evolutionary and ecological approaches for developing the dynamic capability framework.

Frigotto and Zamarian (2015) tackle arguably one of the most intricated issues that the dynamic capability view has faced. Simultaneously pursuing both efficiency and resilience has been one of the puzzles of a routine-based conception of dynamic capabilities. By dividing dynamic capabilities into two elements, sensing and reacting components, the authors show on the example of Tornado crews of the Italian Air Force, how responses can be deployed rapidly, but under the umbrella of a continuous situational reassessment. The findings put future research not only on combinations of routines, hierarchies, and interactions but also the limits of specialization to the forefront.

## **Dynamic capabilities: Emerging markets, networks, slack, and market exit**

### ***Emerging markets***

Since Teece's (2014) provocative article about the lack of progress in international business, dynamic capabilities have been on the research agenda of scholars with an international focus. Building on the idea that ambidexterity is a dynamic capability (O'Reilly III and Tushman, 2008), Deng et al. (2018) theorize about dynamic capabilities in an emergent market context. The authors suggest that firms follow either sequential or structural international ambidexterity and outline success factors for pursuing each of these strategies.

### ***Networks and slack***

Absorptive capacity has been reframed by Zahra and George (2002: 185) 'as a dynamic capability pertaining to knowledge creation and utilization.' Building on this notion, the featured article by Zou et al. (2017) looks at the effect of weak and strong ties on knowledge breadth and depth of absorptive capacity. Weak ties facilitate knowledge breadth whereas strong ties facilitate knowledge depth, both enhancing the innovativeness of the firm.

Similarly Lee and Yang (2017) zoomed in on ties by investigating different characteristics (density, intensity, and reciprocity) and showed by an example of the Taiwanese flat glass industries that strong ties with agile partners (customers and suppliers) are particularly effective in uncertain environments. Noteworthy, they expand their analysis to competitors and how competitive dynamics play out in such environments. Using a service value network, Agarwal and Selen analysed the partnership management of an Australian telecommunications provider. They looked at a range of dynamic capabilities and analysed the isolated and cumulative effects of each all of the dynamic capabilities included in the study. The results are interesting and provide theoretical and practical insights into the partnership management of networks.

The final study in this section is about slack. Slack has been identified as an important antecedent for dynamically capable firm behaviour. Leveraging behavioural theory, Lu and Fang (2013) followed the idea of matching slack resources and performance feedback theory with search behaviour. Most interestingly, they find that firms that are affiliated to business group

react more differentiated to performance feedback in terms of search behaviour than those that are not connected to business groups.

The studies introduced in this section cover a wide range of antecedents and outcomes that enable firms to purposefully change. They shed light on the workings of specific dynamic capabilities such as ambidexterity, absorptive capacity, and networking capabilities and look at contextual elements affecting the workings of dynamic capabilities such as the market context, networks, and behaviour aspects. Outcome variables such as innovation play a major role.

### **Dynamic capabilities and the firm's lifecycle**

Zhou et al. (2017) make use of Teece's (2007) three analytical dimensions of dynamic capabilities: the sensing of opportunities, the seizing of opportunities, and the reconfiguration of a firm's resource base to show that the generally assumed relationship to innovation outcomes is not mono-dimensional. Instead, they demonstrate how strengths in these three kinds of capabilities match to different market and technology innovation outcomes. They confirm the well-established link of innovation and performance.

The case of disinvestment or even exit from industries is rarely discussed, particularly in relation to dynamic capabilities. Lehmborg (2017) adds a most interesting study of five Japanese flat panel display manufacturers that eventually exit the industry. While industry exits may seemingly be similar processes, Lehmborg shows that the five manufacturers faced fundamentally different barriers for their exits depending on their strategic positioning, network position, and commitment to the industry. His three-stage model of industry exit also takes into account the type and frequency of top management changes that were important for the exit process in all five cases.

### **Debates, implications, and future research directions**

This virtual special issue showcases some of the thought-provoking ideas that the *Journal of Management and Organization* has published over the last few years. We show that dynamic capabilities are not only an overarching framework that faces many challenges as a theoretical lens but also opportunities to host provocative and forward looking debates on theory development if interpreted as a larger framework for purposeful organizational change; a framing that David Teece has increasingly used in the last few years and that his article for this special issue also embraces.

The *Journal of Management and Organization* is committed to publish new and original research. This virtual special issue may illustrate this commitment. We have an eye on emerging markets, appreciate distinct context, and allow authors to make steps to tackle some of the most challenging conceptual issues in dynamic capability research. The results are studies that shed light on new phenomena (industry exit and CEO succession) or in unique contexts (Tornado pilots at the Italian Air Force). Future research on dynamic capabilities may benefit from rare settings that allow new perspectives to emerge. We may learn something from integrating organization theory (e.g., mindfulness, resilience). While such inquiries are risky, they potentially change the way we think about dynamic capabilities. The debate about daring to integrate new thoughts is one that has attracted a lot of attention in the dynamic capability literature (Peteraf et al., 2013).

We hope that the virtual special issue inspires debate and invite you to contribute to a wider debate on dynamic capabilities from system theory, to ecological approaches, to dynamic capabilities, and to the mindful organization. The *Journal of Management and Organization* invites you to expand the boundaries of this debate further.

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