

# FORUM

Invited article

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## EXPANDING THE DYNAMIC CAPABILITIES VIEW: SPECIAL CONTRIBUTIONS

### INTRODUCTION

Traditional literature on learning, knowledge, innovation, change, structure, resources, and routines, among others, indicates the capabilities that can lead an organization to achieve superior results through contextual reconfiguration (March, 1992; Ghemawat, 2002; Porter, 1996; Teece, Pisano, & Shuen, 1997). Contemporaneously, most notably, concerning unstable and complex environments, the emergence of management practices is attributable to the search for greater analytical capacity for determining the potential and limits of organizational learning processes and behaviors in order to manage dynamic environments (Meirelles & Camargo, 2014). However, it is important to recognize that any theoretical approach is an abstraction of reality and represents the yearnings, cognitive limits, and values of its theorists. This aspect can also be observed historically in the field of strategy studies. As in all scientific work, the theoretical and empirical work on organizational strategy has developed in a fragmented way with approaches, models, and proposals disconnected from each other in many ways. In recent years, there has been much criticism of traditional approaches such as planning and industry relevance, which reveal that the concepts derived from traditional economic and social theory are no longer able to explain the essential elements of strategic organizational practices fully. This limitation has reduced the appeal of traditional approaches and models to managers and researchers. However, it is important to recognize that the traditional approaches have evolved and contributed toward solving a large part of organizational problems and enhancing understanding of the new perspectives of human and organizational capabilities that are integrated into routines, processes, and structures. The Resource-Based View (RBV) (Wernerfelt, 1984) has significantly contributed to this end (Acedo, Barroso, & Galan, 2006), in explaining how companies can build specific capabilities using existing resources in the pursuit of long-term competitive advantage (Newbert, 2008).

The RBV has led to the emergence of the concept of essential organizational competencies (Prahalad & Hamel, 1990); additionally, the pursuit of new explanations on the contribution of internal factors toward increasing a firm's competitive advantage has led to discussions on competence-based competition (Hamel & Heene, 1994). Thus, competencies have come to be viewed as a firm's ability to synthesize and integrate resources, products, and services, and as outcomes of the collective learning in the organization (Prahalad & Hamel, 1990). This view complements the dominant Porterian view in the field of strategy by drawing attention to the internal aspects of organizations.

**ADRIANA ROSELI WÜNSCH  
TAKAHASHI**

adrianarwt@terra.com.br  
Professor at Universidade Federal  
do Paraná, Departamento de  
Administração – Curitiba – PR, Brazil

**SERGIO BULGACOV**

s.bulgacov@gmail.com  
Professor at Fundação Getulio  
Vargas, Escola de Administração de  
Empresas de São Paulo – São Paulo  
– SP, Brazil

**CLAUDIA CRISTINA BITENCOURT**

claudiacb@unisinios.br  
Professor at Universidade do Vale  
do Rio dos Sinos, Centro de Ciências  
Econômicas – São Leopoldo – RS,  
Brazil

**HALE KAYNAK**

halekaynak@gmail.com  
Professor at The University of Texas  
Rio Grande Valley – Edinburg – TX,  
USA

However, in the face of environmental changes and awareness on the dynamic nature of competencies, the lack of clarity on resource management has led to the reshaping of competencies (Turner & Crawford, 1994) because new competencies can be developed through strategic redirection. The debate over the literature on dynamicity of competencies and environmental dynamism led to the proposal of the concept of dynamic capabilities in 1997 by Teece, Pisano, and Shuen, owing to the ability of organizations to reconfigure and develop competencies in the face of intense environmental changes. A firm can manage the dynamic nature of capabilities by looking beyond its environment and resources. This is because capabilities need to be developed continually through learning and coordination of organizational efforts and in relation to the dynamics of the environment (Seidl & Whittington, 2014). Therefore, it is important to highlight organizational strategy as the basis for these activities mainly because it involves an action (competencies) by the organization as a whole and its potential to perform the action (capabilities). In this regard, the relationship of capabilities and competencies with strategies becomes inevitably clear, especially when considering practices, structures, and routines that can lead to strategic alignment with the local and global contexts. Changes in the contexts and organizational profiles across the globe have intensively warned about the rapid fluctuations between supply and demand and organizational structural conditions that hinder organizational adaptation to changing external environments (Chakrabarti, 2015; Devece, Peris-Ortiz, & Rueda-Armengot, 2016) and structural and resource reorganization (Teece, 2007), in terms of organizational restructuring and reconfiguration (Girod & Whittington, 2017).

Numerous studies conducted on the subject indicate the need for continuous research on competencies and capabilities, and thus motivate this special edition. Such research is required not only to contribute to the competitive and developmental condition of different types of organizations, but also to practitioners in search of solutions to existing and emerging problems. In this context, environmental turbulence and organizational responses have drawn the attention of some academic associations and researchers toward the search of theoretical, empirical, and methodological knowledge that can contribute to a better description of economic and social problems relevant to organizations and society (Tonelli, 2017). However, studies on dynamic capabilities have also received numerous criticisms, which are considered natural in the course of advancing knowledge about a given phenomenon. It is necessary to understand criticisms in a better manner and seek closer ties with the world of organizational practices. The evolution of the dynamic capacities concept will certainly

take place through a dialogue between the different dynamic capabilities approaches, as illustrated in Peteraf, Stefano, and Verona (2013), which extends Teece, Pisano, and Shuen (1997) and Eisenhardt and Martin (2000). Another example is MacLean, MacIntosh, and Seidl (2015), which presents a new study perspective of this concept for individual-level analysis in the light of creative action, which is based on social theory and philosophy. A divergence of perspectives and approaches emerge from the ongoing debate on dynamic capabilities. A few examples of this divergence include the differentiation between operational or ordinary capabilities and dynamics capabilities (Protogerou, Caloghirou, & Lioukas, 2011; Teece, 2014; Wilden & Gudergan, 2015; Wilden, Gudergan, Nielsen, & Lings, 2013; Winter, 2003), value-added timing and relevance of capabilities for different levels of environmental dynamics (Peteraf, Stefano, & Verona, 2013), questions about organizational ambidexterity and hypercompetition (Birkinshaw, Zimmermann, & Raisch, 2016; Kriz, Voola, & Yuksel, 2014), risk and uncertainty involved in the organizational environment, and relationship with dynamic capacities and the lifecycle of capabilities (Helfat & Peteraf, 2003). Thus, several studies have been published with different emphases such as the relational approach to governance (Cheng, Cheng, & Huang, 2014), abilities and knowledge of managers and dynamic managerial capabilities (Adner & Helfat, 2003; Augier & Teece, 2008; Helfat & Martin, 2015; Helfat & Peteraf, 2015; Kor & Mesko, 2013; Teece, 2012;), relationship between superior performance and dynamic capabilities (Denrell & Zhao, 2013; Protogerou, Caloghirou, & Lioukas, 2011; Wang, Senaratne, & Rafiq, 2015), relationship between different levels of capabilities—from operational to strategic routine (Wilhelm, Scholomer, & Maurer, 2015), performance implications (Wang, Senaratne, & Rafiq, 2015) of organizational restructuring and organizational reconfiguration (Girod & Whittington, 2017), dynamic capabilities and multinationals (Prange & Verdier, 2011; Teece, 2014) or small businesses (Eriksson, Nummela, & Saarenketo, 2014), and core capabilities and core rigidities (Leonard-Barton, 1992).

With this call, it is expected that these various possibilities and recommendations for future studies on dynamic capabilities may represent some steps towards a better understanding of the possible relationships between organizational capabilities and the environment and foster new studies. Numerous papers were submitted from Brazil and abroad and among these, the national and foreign evaluators of this forum selected and invited three texts. Further, the essay, two sections of bibliographical indications, and a review were produced. We thank all the authors who submitted articles and the invited authors for the trust reposed in us.

## CONTRIBUTIONS

### Accepted articles

The limitations and the static aspects concerning the alignment of RBV and information technology (IT) to contemporary businesses depict an inability to obtain resources to enable sustainable competitive advantage (Barney & Clark, 2007). Dynamic capability (DC) emerges as a response, through the reconfiguration of resources, to meet requirements and address external environmental changes and internal aspects of the organization. Considering the scenario of the Brazilian political and economic crises, the paper titled *IT-enabled dynamic capability on performance: An empirical study of BSC model* by Adilson Carlos Yoshikuni and Alberto Luiz Albertin provides empirical evidence regarding the effect of IT-Enabled Dynamic Capability (ITDC) on corporate performance in economic turbulence. In the context of the balanced scorecards helping firms understand and use dynamic causal models effectively to guide strategies and operations, the study investigates the relationship between ITDC, business process improvement (BPI), customer performance (CP), and financial performance (FP). With target population comprising organizations from several sectors, the authors measure IT business value through executives' perceptions and key informants. The results of the study demonstrate a conceptual balanced scorecard (BSC) model providing evidence to linkages between ITDC, BPI, CP, and FP in economic turbulence.

The paper by André Cherubini Alves, Denise Barbieux, Fernanda Maciel Reichert, Jorge Tello-Gamarra, and Paulo Antônio Zawislak—*Innovation and dynamic capabilities of the firm: Defining an assessment model*—presents a model based on the four essential capabilities found in a firm: development, operations, management, and transaction capabilities. Data from a survey of 1,107 Brazilian manufacturing firms were used for empirical testing. The model demonstrates important convergences that empirically support the theoretical assertions of the dynamic capabilities framework proposed by Teece and his colleagues. As dynamic capabilities are invisible and difficult to measure, the research provides some evidence of their existence. Moreover, as stated by the authors, it is a first step toward building a comprehensive model of firms' innovation and dynamic capabilities. The results demonstrate that the four capabilities of the model influence firms' innovative performance, even at different levels.

The paper "*Coupled processes*" as dynamic capabilities in systems integration, by Milton de Freitas Chagas Jr., Dinah Eluze Sales Leite, and Gabriel Torres de Jesus examines the scenario of the dynamics of innovation for complex products and systems and

presents many differences between complex products and mass-produced goods. The authors consider the view that dynamic capabilities are embedded in project-based organizational processes that are pervasive in inter-organizational innovation networks. They undertake this investigation by analyzing the depth and width of systems integrators' technological knowledge, studying the evolving technological paths from one product generation to the next through two case studies in the Brazilian aerospace industry, and considering systems integration as an empirical instantiation of dynamic capabilities. The paper demonstrates that the dynamics of innovation in complex systems industries is becoming an independent research stream. A proposed "coupled processes" model intertwines two organizational processes considered the two levels of dynamic capabilities—new product and technological developments. The "coupled processes" model is depicted as a set of dynamic capabilities presenting ambidexterity in complex systems industries, which is a finding that may be relevant for newly industrialized economies.

### Invited articles

The text titled *Mnemonic capabilities: Collective memory as a dynamic capability* by Diego M. Coraiola, Roy Suddaby, and William M. Foster presents the important but overlooked role of time, history, and memory in creating a sustainable competitive advantage. The core argument is that the capacity to manage collective memory is a critical competence of modern organizations. The authors draw from two previously unrelated streams of knowledge in strategic management. First, they engage with the burgeoning literature on dynamic capabilities, which describe the capacity of some organizations to adapt the available resources, both within and outside the firm, to the demands of their environment (Teece, Pisano, & Shuen, 1997). The dynamic capabilities literature contains an implicit element of time, history, and memory, which we have elaborated later in this section. Second, they adopt the emergent "historical turn" in management theory, which argues for a more nuanced and constructivist view of the past as a fundamental competitive resource of modern organizations. The authors identify three key competences in managing the past: the objective use of collective memory to reproduce existing routines, the interpretive reconstruction of collective memory to allow adaptation to environmental change, and the imaginative extension of collective memory into the future in an effort to articulate internal organizational continuity and identity in the face of external environmental change.

The article *Dynamic capabilities, creative action and poetics* by Donald MacLean, demonstrates that despite criticism—for

example, dynamic capabilities were criticized for conceptual inconsistencies and the lack of a coherent theoretical foundation (Arend & Bromiley, 2007; Giudici & Reinmoeller, 2012)—dynamic capabilities continue to develop, particularly concerning managerial action (MacLean, MacIntosh, & Seidl, 2015), as part of what has been termed as “dynamic managerial capability (DMC),” (Helfat & Martin, 2015; Helfat & Peteraf, 2009, 2015). While the renewed focus on managerial action will enrich the research on dynamic capabilities in terms of conceptual sophistication and potential relevance to practicing managers, the paper aims to take the debate on DC into a new territory. It argues that a focus on the embodied practice of managing by the managers requires us to acknowledge faculties that will enhance our understanding of human experience that can be understood just as well, if not better, in terms of arts rather than science. In particular, it should highlight collective creative action at the core of the DC research as a form of social poetry (MacLean & MacIntosh, 2015; Shotter & Katz, 1996) rather than as a rationally coordinated mechanism (MacIntosh & MacLean, 1999). This paper argues that it would be important to sharpen our focus on real people and real experiences for comprehending strategic change fully, which, in turn, means that we must consider other fields that usually operate alongside the logical ones. We must pay more attention to the “non-rational” sides of ourselves including our imaginations, intuitions, attractions, biographies, preferences, and aesthetic faculties and capabilities.

*Gendering dynamic capabilities in micro firms* by Yevgen Bogodistov, André Presse, Oleksandr P. Krupskiy, and Sergii Sardak, based on the research stream on dynamic capabilities, stresses on the role of organizational capabilities, specifically focusing on managerial capabilities and on the creation of a sub-concept of dynamic capabilities, namely dynamic managerial capabilities. Initially introduced by Adner and Helfat (2003), dynamic managerial capabilities focus on managers’ resource-related decisions (Sirmon & Hitt, 2009), underpinned by managerial cognitive capabilities (Helfat & Peteraf, 2015). Apart from cognitive underpinning, several other related predictors of dynamic capabilities, such as gender diversity, remain undiscovered. As per the authors, until now, gender issues have been almost completely ignored in the dynamic capabilities literature. To this stream of research, the study, by analyzing the effects of gender diversity on the dynamic capabilities of micro firms, provides empirical evidence on the important role of gender diversity in teams for dynamic capabilities of micro firms. In particular, they look at the effect of a manager’s gender on the sensing capacities of a firm and investigate the impact of personnel composition on seizing and reconfiguration capacities. Their main finding is that female managers have

several shortcomings concerning a firm’s sensing capacity but that gender diversity among personnel combined with a female manager increases this capacity. Team gender diversity has positive effects on seizing and reconfiguration abilities of a firm.

Thus, this special edition showcases articles that reveal the more economical and normative nature of dynamic capabilities, while others reveal a more social nature, different epistemologies, approaches, theories, and methodologies. This work aims at demonstrating the relevance and contemporaneity of this concept in strategic and organizational studies and its possible effects on a firm’s management. New ways of thinking are always welcome! Last, this work is expected to motivate and inspire further studies in this field, which are aimed at conceptual and practical improvement. Good reading to all! The editors.

## Essay, Book review, and Book recommendations

The authors of the essay of this issue, Júlia Doebber Herrmann, Lucas Cé Sangalli, and David J. Teece, describe the evolution of the concept of dynamic capabilities and highlight their relevance in situations where results are not predictable and uncertainty is generalized, as is the current scenario in the American and Brazilian economies. Subsequently, they discuss where the dynamic capabilities reside and present several practical examples. Finally, they relate the capabilities with the business ecosystem and communicate their experiences of collaboration with Brazil that aimed to bridge the gap between the academic and corporate world through the First Silicon Valley Institute for Business Innovation (Un) Conference (SViBi) in January 2017.

In addition, the review of the book *Lead and Disrupt: How to solve the innovator’s dilemma* by O’Reilly III and Tushman (2016) was written by Dimária Silva e Meirelles. In this text, the author highlights the main theoretical points of his work, such as ambidexterity, organizational alignment, and expansion process in new businesses, and showcases the richness of the presented cases.

Martha S. Feldman and Joaquín Alegre organized the sections of book recommendations. Feldman points out that the enacted routines are also a source of continuous change; additionally, she presents the concept of routine dynamics and recommends several relevant books about routines. Therefore, it is a relevant concept to study dynamic capabilities. Alegre recommends several books on dynamic capabilities, highlighting that dynamic capabilities have become a central concept in strategy and organizations in the past decades because they play a significant role in value creation within organizations, and are connected to organizational learning, change, and adaptation.



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## REFERENCES

- Acedo, J., Barroso, C., & Galan, J. L. (2006). The resource-based theory: Dissemination and main trends. *Strategic Management Journal*, 27(7), 621-636. doi:10.1002/smj.532
- Adner, R., & Helfat, C. (2003). Corporate effects and dynamic managerial capabilities. *Strategic Management Journal*, 24(10), 1011-1025. doi:10.1002/smj.331
- Arend, R. and Bromiley, P. (2009) Assessing the dynamic capabilities view: Spare change, everyone?. *Strategic Organization*, 7(1), 75-90. doi:10.1177/1476127008100132
- Augier, M., & Teece, D. (2008). Strategy as evolution with design: The foundations of dynamic capabilities and the role of managers in the economic system. *Organization Studies*, 29(8-9), 1187-1208. doi:10.1177/0170840608094776
- Barney, J. B., & Clark, D. N. (2007). Resource-based theory creating and sustaining competitive advantages. Oxford, UK: Oxford University Press.
- Chakrabarti, A. (2015). Organizational adaptation in an economic shock: The role of growth reconfiguration. *Strategic Management Journal*, 36(11), 1717-1738. doi:10.1002/smj.2309
- Cheng, H-H., Chen, M-C., & Huang, C-M. (2014). Assessing inter-organizational innovation performance through relational governance and dynamic capabilities in supply chain. *Supply Chain Management: An International Journal*, 19(2), 173-186. doi:10.1108/SCM-05-2013-0162
- Denrell, J., Fang, C., & Zhao, Z. (2013). Inferring superior capabilities from sustained superior performance: A Bayesian analysis. *Strategic Management Journal*, 34(2), 182-196. doi:10.1002/smj.2001.
- Eriksson, T., Nummela, N., & Saarenketo, S. (2014). Dynamic capability in a small global factory. *International business review*, 23(1), 169-180. doi:10.1016/j.ibusrev.2013.03.007
- Ghemawat, P. (2002). Competition and business strategy in historical perspective. *Business History Review*, 76(1), 37-74.
- Girod, S. J. G., & Whittington, R. (2017). Reconfiguration, restructuring and firm performance: Dynamic capabilities and environmental dynamism. *Strategic Management Journal*, 38(5), 1121-1133. doi:10.1002/smj.2543
- Giudici, A. & Reinmoeller, P. (2012). Dynamic capabilities in the dock: A case of reification? *Strategic Organization*, 10(4), 436-449. doi:10.1177/1476127012457977
- Hamel, G., & Heene, A. (1994). *Competence-based competition*. Chichester, UK: John Wiley & Sons.
- Helfat, C., & Martin, J. (2015). Dynamic managerial capabilities: Review and assessment of managerial impact on strategic change. *Journal of Management*, 41(5), 1281-1312. doi:10.1177/0149206314561301
- Helfat, C., & Peteraf, M. (2003). The dynamic resource-based view: Capability lifecycles. *Strategic Management Journal*, 24(10), 997-1010. doi:10.1002/smj.332
- Helfat, C., & Peteraf, M. (2015). Managerial cognitive capabilities and the microfoundations of dynamic capabilities. *Strategic Management Journal*, 36(6), 831-850. doi:10.1002/smj.2247
- Kor, Y. Y., & Mesko, A. (2013). Dynamic managerial capabilities: Configuration and orchestration of top executives' capabilities and the firm's dominant logic. *Strategic Management Journal*, 34(2), 233-244. doi: 10.1002/smj.2000
- Kriz, A., Voola, R., & Yuksel, U. (2014). The dynamic capability of ambidexterity in hypercompetition: Qualitative insights. *Strategic Management Journal*, 22(4), 287-299. doi:10.1080/0965254X.2013.876075
- Leonard-Barton, D. (1992). Core capabilities and core rigidities: A paradox in managing new product development. *Strategic Management Journal*, 13(Special), 111-125.
- MacLean, D., MacIntosh, R., & Seidl, D. (2015). Rethinking dynamic capabilities from a creative action perspective. *Strategic Organization*, 13(4), 340-352. doi:10.1177/1476127015593274
- March, J. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 71-87. doi:10.1287/orsc.2.1.71
- Meirelles, D. S., & Camargo, A. A. B. (2014). Capacidades dinâmicas: O que são e como identificá-las? *RAC-Revista de Administração Contemporânea*, 18(3), 41-64. doi:10.1590/1982-7849rac20141289
- Newbert, S. (2008). Value, rareness, competitive advantage, and performance: A conceptual-level empirical investigation of the resource-based view of the firm. *Strategic Management Journal*, 29(7), 745-768. doi:10.1002/smj.686

- O'Reilly III, C. A., & Tushman, M. L. (2016). *Lead and disrupt: How to solve the innovator's dilemma*. Stanford, USA: Stanford Business Books.
- Peteraf, M., Di Stefano, G., & Verona, G. (2013). The elephant in the room of dynamic capabilities: Bridging two diverging conversation together. *Strategic Management Journal*, 34(12), 1389-1410. doi:10.1002/smj.2078
- Porter, M. (1996). What is Strategy? *Harvard Business Review*, 61-78. Retrieved from <https://hbr.org/>
- Prahalad, C. K., & Hamel, G. (1990). The core competence of the corporation. *Harvard Business Review*, 68(3). Retrieved from <https://hbr.org/>
- Prange, C., & Verdier, S. (2011). Dynamic capabilities, internationalization process, and performance. *Journal of World Business*, 46(1), 126-133. doi:10.1016/j.jwb.2010.05.024
- Protogerou, A., Caloghirou, Y., & Lioukas, S. (2011). Dynamic capabilities and their indirect impact in firm performance. *Industrial Corporate Change*, 21(3), 615-647. doi:10.1093/icc/dtro49
- Seidl D., & Whittington, R. (2014). Enlarging the strategy-as-practice research agenda: Towards taller and flatter ontologies. *Organization Studies*, 35(10), 1407-1421. doi:10.1177/017084061454188
- Shotter J., & Katz, A. M. (1996). Articulating a practice from within a practice itself: Establishing formative dialogues by use of a 'social poetics'. *Concepts and Transformation*, 1(2-3), 213-237. doi:10.1075/cat.1.2-3.07sho
- Teece D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of sustainable enterprise performance. *Strategic Management Journal*, 28(13), 1319-1350. doi:10.1002/smj.640
- Teece, D. J. (2012). Dynamic capabilities: Routines versus entrepreneurial action. *Journal of Management Studies*, 49(8), 1395-1401. doi:10.1111/j.1467-6486.2012.01080.x
- Teece, D. J. (2014). A dynamic capabilities-based entrepreneurial theory of the multinational enterprise. *Journal of International Business Studies*, 45(1), 8-37. doi:10.1057/jibs.2013.54
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533. doi:10.1002/(SICI)1097-0266(199708)18:7<509::AID-SM-J882>3.0.CO;2-Z
- Teece, D., & Leih, S. (2016). Uncertainty, Innovation, and Dynamic Capabilities: An introduction. *California Management Review*, 58(4), 5-12. doi:10.1525/cm.2016.58.4.5
- Teece, D., Peteraf, M., & Leih, S. (2016). Dynamic capabilities and organizational agility: Risk, uncertainty, and strategy in the innovation economy. *California Management Review*, 58(4), 13-35. doi:10.1525/cm.2016.58.4.13
- Tonelli, M. J. (2017). Editorial. *RAE-Revista de Administração de Empresas*, 57(2), 121. doi:10.1590/S0034-759020170201
- Turner, D., & Crawford, M. (1994). Managing current and future competitive performance: The role of competence. In G. Hamel, & A. Heene (Eds.), *Competence-based competition* (pp. 241-264). Chichester, UK: John Wiley & Sons.
- Wang, C. L., Senaratne, C., & Rafiq, M. (2015). Success traps, dynamic capabilities and firm performance. *British Journal of Management*, 26(1), 26-44. doi:10.1111/1467-8551.12066
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171-180. doi:10.1002/smj.4250050207
- Wilden, R., & Gudergan, S. P. (2015). The impact of dynamic capabilities on operational marketing and technological capabilities: Investigating the role of environmental turbulence. *Journal of the Academy of Marketing Science*, 43(2), 181-199. doi:10.1007/s11747-014-0380-y
- Wilden, R., Gudergan, S.P., Nielsen, B. B., & Lings, I. (2013). Dynamic capabilities and performance: Strategy, structure and environment. *Long Range Planning*, 46(1-2), 72-96. doi:10.1016/j.lrp.2012.12.001
- Wilhelm, H., Schlomer, M., & Maurer, I. (2015). How dynamic capabilities affect the effectiveness and efficiency of operating routines under high and low levels of environmental dynamism. *British Academy of Management*, 26(2), 327-345. doi:10.1111/1467-8551.12085
- Winter, S. G. (2003). Understanding dynamic capabilities. *Strategic Management Journal*, 24(10), 991-995. doi:10.1002/smj.318