

# The Lacuna in Dynamic Capabilities Research

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## Abstract

This paper is to empirically examine the lacuna in dynamic capabilities research. The concept of dynamic capabilities was developed to compliment resource-based view, and also, clarify how companies respond to changes in the operating environment, and as well, realize sustainable competitive advantage. Many researchers concurred that with shortage of resources and widespread economic crises in all sectors, business enterprises must develop dynamic capabilities to properly distribute resources across alternatives, quickly adapt and respond to environmental turbulence and ultimately grow, advance and survive. Thus, enhancing resources reconfiguration and regeneration, to support business strategy and development of innovation. The dynamic capabilities literature has been criticized for being tautological, and therefore, the effect of dynamic capabilities is assumed to be negligible or indirect. Accordingly, literature has acknowledged the importance of dynamic capabilities on value-creating benefits and altering firm outcomes, however, each capability provides a unique benefit and also, the processes of value creation remains unclear in the stream of research.

Keywords: *Dynamic Capabilities, Resource-based View, Sustainable Competitive Advantage, Small & Medium Enterprises*

## 1.0 Introduction

According to Barrales-Molina et al. (2015), the concept of dynamic capabilities was developed to compliment resource-based view, and also, clarify how companies respond

to changes in the operating environment, and as well, realize sustainable competitive advantage. Likewise, Gupta et al. (2014) contended that the dynamic capabilities concept is primarily developed to provide explanations on how business firms develop core dynamic capabilities such as components capabilities (i.e., sensing and shaping as well as seizing of opportunities), and integrative capabilities (i.e., recombining and reconfiguring of both tangible and intangible resources), for them to remain competitive in the marketplace (Teece, 2007).

In addition, Froehlich et al. (2017) argued that the dynamic capabilities approach is designed to explain how business enterprises outperform the others, by recognizing and incorporating opportunities from external environment, assembling resources and developing routines and processes to obtain positive results. Also, Albort-Morant et al. (2016) highlighted that with shortage of resources and widespread economic crises in all sectors, business enterprises must develop dynamic capabilities to properly distribute resources across alternatives, quickly adapt and respond to environmental turbulence and ultimately grow, advance and survive. Thus, enhancing resources reconfiguration and regeneration, to support business strategy and development of innovation.

## **2.0 Dynamic Capabilities**

The extant literature has provided a number of definitions on dynamic capabilities. For instance, Teece et al. (1997) define dynamic capabilities as the firm's ability to achieve new innovation and competitive advantage in a rapidly changing environment, by building, integrating, and reconfiguring internal and external competencies. Also, Pavlou and El Sawy (2011) have defined dynamic capabilities as a necessary tool for recombination and reconfiguration of operational capabilities, through integration, learning, sensing and coordination capabilities. Equally, Froehlich et al. (2017) defined dynamic capabilities as skill, process, or capability to transform, build, reconfigure, combine and integrate business routines and resources to gain competitive advantage.

Additionally, Albort-Morant et al. (2016) defined dynamic capabilities as the transformation of ordinary capabilities resulting to modification in production process, product or development of new ordinary capabilities. Correspondingly, Zahra, Sapienza, and Davidsson (2006) and Cepeda and Vera (2007) described dynamic capabilities as a method of reconfiguring organizational resources and operational routines to promote competitiveness and innovation.

### **2.1 The Early Model of Dynamic Capabilities**

According to Froehlich et al. (2017), the basis of dynamic capabilities research is rooted in the first and second models of dynamic capabilities developed by Teece et al. (1997) and Teece (2007). While, the focus of the first dynamic capabilities model is to succinctly

describe dynamic capabilities using the following typologies: (a) routines, resources, skills, processes, assets and capabilities; (b) rapid changes in the environment; (c) capability to modify, reconfigure, build, integrate, change and combine organizational resources; and (d) competitive advantage. On the contrary, the second dynamic capabilities model provided explanations on how firms gain competitive advantages in a dynamic environment, through any of the following capabilities: (a) sensing and shaping of opportunities; (b) seizing of opportunities; and (c) managing threats/transforming alignment and realignment of tangible and intangible assets.

Also, unlike the first model, the second framework of Teece (2007) highlighted how dynamic capabilities are supported by processes and routines, to foster innovation in a competitive business environment. According to Teece (2007), business processes and routines are necessary for firms to create and facilitate the implementation of dynamic capabilities. Hence, each process in an enterprise reflects an entirely unique element of dynamic capabilities. Consequently, Froehlich et al. (2017) argued that once dynamic capabilities are implemented, corresponding effect is realized in terms of enhanced innovation capability of an enterprise. The Teece's Model of dynamic capabilities is depicted in Figure 1.

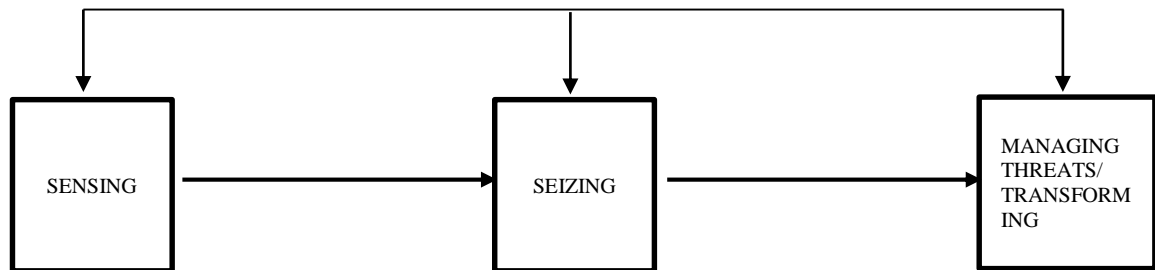


Figure 1

*The Early Model of Dynamic Capabilities*

Source: Teece (2007).

## 2.2 The Extended Model of Dynamic Capabilities

According to strategic management researchers such as Daspit et al. (2016), capabilities generally are the primary concern of companies because they are deeply rooted in business routines, and as such, are very crucial for business survival. Accordingly, Teece (2014) has categorized capabilities into dynamic capabilities and ordinary capabilities. Also, Albort-Morant et al. (2016) argued that the concept of dynamic capabilities provided a foundation for business strategy and as well, resulted to regeneration or combination of resources into capabilities. While, dynamic capabilities are the capacity of an enterprise to

combine, reconfigure and transform resources into operational or ordinary capabilities, resulting to alteration of company's processes, product or creation of new ordinary capabilities.

On the other hand, ordinary capabilities relate to the operational working of an enterprise, in terms of line activities, employees and so on.

Based on this, Barrales-Molina et al. (2015) described dynamic capabilities as meta-routines necessary for firms to respond or adapt to environmental needs and reconfigure operating routines. Equally, Gupta et al. (2014) emphasized that dynamic capabilities is an infinite and all-encompassing concept that involves diverse range of activities and variety of competences. Hence, capabilities originate from varying path and absolutely different starting points, and yet, are identifiable through their unique features and common characteristics across firms. Nevertheless, several authors have proposed a number of dynamic capabilities frameworks. For example, a dynamic capabilities model that consists of coordinating, learning, integrating and responsiveness was developed by Wang and Shi (2011). Likewise, Corte and Del Gaudio (2012) have developed a dynamic capabilities model that contains recognizing (threats and opportunities), leveraging (existing resources, resource base and intangible assets) and creating (new resources configuration).

In addition, Pavlou and El Sawy (2011) have designed a dynamic capabilities framework that comprises of sensing, learning, integration and coordination capabilities as tools for reconfiguration of resources and operational capabilities. However, this study adopts the conception of dynamic capabilities from Pavlou and El Sawy (2011), considering that it concurred with the early dynamic capabilities model (Teece, 2007; Teece et al., 1997). Therefore, this study operationalized dynamic capabilities in relation to integrating capability, sensing capability and learning capability. The dynamic capability framework is shown in Figure 2.

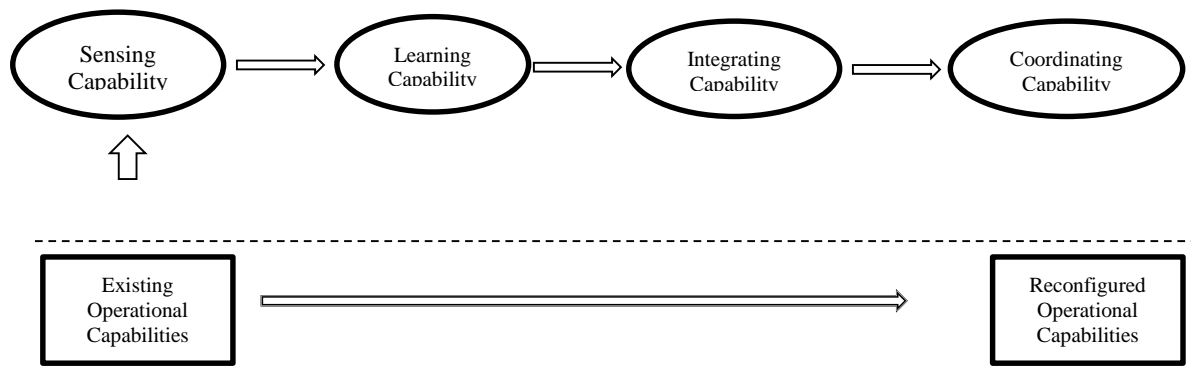


Figure 2

*The Extended Model of Dynamic Capabilities*

Source: Pavlou and El Sawy (2011)

### 3.0 The Lacuna in Dynamic Capabilities Research

Although, literature on capabilities-based view has established the influence of dynamic capabilities on creation of new operational capabilities and sustained competitive advantage of firms (Karna, Richter & Riesenkampff, 2015). Yet, the field is riddled with inconsistencies and strong debate, because of outright contradictions and overlapping definitions (Albort-Morant et al., 2016). Likewise, Forés and Camisón (2016) argued that though, dynamic capabilities concept was built on the proposition that for firm to survive and succeed in a competitive environment, it needs to renew, improve and evolve products and processes, to protect itself against technological obsolescence and imitation of competitors to survive and succeed; however, there are some underlying processes that determine the tangibility of dynamic capabilities' benefits. Hence, dynamic capabilities of firms are context specific.

Similarly, the dynamic capabilities literature has been criticized for being tautological, and therefore, the effect of dynamic capabilities is assumed to be negligible or indirect (Gupta et al., 2014). Accordingly, Daspit et al. (2016)

emphasized that though, literature has acknowledged the importance of dynamic capabilities on value-creating benefits and altering firm outcomes, however, each capability provides a unique benefit and also, the processes of value creation remains unclear in the stream of research. In addition, Froehlich et al. (2017) maintained that though, studies on dynamic capabilities focuses on innovation, competitive advantage and organizational change, however, literature in this field is purely theoretical and the concept is difficult to implement.

Despite increasing growth and interest in dynamic capabilities – competitive advantage research, still, scholars in the management sciences such as Kazadi et al. (2016) and Pavlou and El Sawy (2011) maintained that in the dynamic capabilities research, there is a “black box” that needs to be unpacked. Likewise, Ricciardi et al. (2016) argued that the influence of various components of dynamic capabilities of firms on competitive advantage is paradoxical. While, Froehlich et al. (2017) empirically established that the relationship between dynamic capabilities and competitive advantage or innovation performance is path dependent, as other factors may have an influence.

Accordingly, other scholars such as Froehlich et al. (2017) and Barrales-Molina et al. (2015), emphasized that both the early model and extended dynamic capabilities model that involves sensing, integration, learning and coordination as integral tools for reconfiguration of capabilities, are yet to fully explained the micro foundation levels’ of dynamic capabilities. Thus, suggesting for further research on micro foundation application of dynamic capabilities and its influence on innovation and competitive advantage of firms in dynamic business setting.

In the same way, Barrales-Molina et al. (2015) argued that the dynamic capabilities research lacks empirical support from the literature because it is full of abstraction, and as well, calls for research consolidation. Thus, the micro foundation levels’ application of dynamic capabilities needs to be empirically studied to establish how capabilities are reconfigured or recombined together, to foster innovation and competitive advantage of firms in a dynamic and distinct business setting.

Consequently, Kazadi et al. (2016) have suggested the need for development and testing of new sets of dynamic capabilities. A summary of the lacuna in dynamic capabilities research (the paradox and black box in dynamic capabilities research, micro foundation levels application of firms' dynamic capabilities, and need for new sets of dynamic capabilities and research consolidated), as well as suggestion for future research was provided in table in Table 1.

Table 1

*The Lacuna in Dynamic Capabilities Research and Suggestions for Future Research*

<b>Authors</b>	<b>Lacuna in Dynamic Capability Research</b>	<b>Suggestions for Further Research</b>
1. Albort-Morant et al. (2016)	Outright contradictions and overlap.	Investigate more on of dynamic capabilities.
2. Kazadi et al. (2016) and Ricciardi et al. (2016)	There is a black box and paradox in dynamic capability research.	Open the black box and investigate more on the paradox.
3. Froehlich et al. (2017) and Barrales-Molina et al. (2015)	Lack of explanation on micro foundation levels of dynamic capabilities	Explore more on micro foundation application of dynamic capabilities.
4. Kazadi et al. (2016)	Dearth of new sets of dynamic capabilities	Empirically test new sets of dynamic capabilities
5. Barrales-Molina et al. (2015)	Lack of empirical support and research consolidation	Needs to consolidate dynamic capabilities research.

Based on the lacuna in the dynamic capability research, the study streamlines various research streams in the dynamic capabilities – innovation literature.

#### **4.0 The Research Streams in Dynamic Capabilities – Innovation Literature**

Despite scholarly work that seeks to advance the early conception of dynamic capabilities and calls for scholars to unpack the “black box” in the dynamic capabilities research (Pavlou & El Sawy, 2011), by empirically testing the combine influence of two or more dynamic capabilities on innovation or any competitive advantage construct (Kazadi et al., 2016). Notwithstanding, research

effort stops at examining the relationship between internal knowledge creation capability and absorptive capacity and radical and incremental innovation (Forés & Camisón, 2016), dynamic capabilities and relational learning capabilities and green innovation performance (Albort-Morant et al., 2016), and sensing, integration and reconfiguration and technological and market innovation (Zhou et al., 2017).

Nevertheless, Froehlich et al. (2017) had empirically investigated the influence of innovation process management capability using the micro foundation levels' debate on innovation among chemical companies in Brazil. Similarly, a relationship between market knowledge competence and market-based innovation (Ozkaya et al., 2015), innovation process and innovation performance (Parthasarthy & Hammond, 2002), and learning with market and marketing innovation (Storbacka & Nenonen, 2015) has been empirically established.

Although, literature has reported a relationship between diverse sets of firms' dynamic capabilities and a number of innovation performance constructs. However, little is known in relation to dynamic capabilities – marketing innovation research (Zhou et al., 2017). Besides, there is scanty literature on the relationship between marketing knowledge management capability, innovation process management capability and organizational learning capability as dynamic capabilities, and marketing innovation of SMEs (Muddaha, Kheng & Sulaiman, 2018).

Table 2

*The Research Streams in the Dynamic Capabilities - Innovation Literature*

S/No	Authors	Methodology	Dynamic Capabilities	Elements of Dynamic Capabilities	Innovation	Findings
1.	Forés and Camisón (2016)	Quantitative	Knowledge accumulation capability	Absorptive capacity	Radical and incremental innovation	Mixed findings.
2.	Albort-	Quantitative	Dynamic	Sensing,	Green	Positive



	Morante et al. (2016)		capabilities	learning, integrating and coordination	innovation performance	and significant
3.	Froehlich et al. (2017)	Qualitative case study	Sensing capability	Innovation process management capability (IPMC)	Innovation	IPMC fosters innovation

Table 2 Continued

S/N o.	Authors	Methodology	Dynamic Capabilities	Elements of Dynamic Capabilities	Innovation	Findings
4.	Zhou et al. (2017)	Quantitative	Dynamic capabilities	Sensing, integration (internal and external) and reconfiguration	Technological innovation and, market innovation	Mixed findings.
5.	Tepic et al. (2014)	Quantitative		Innovation process quality	Innovation project performance	Positive and significant.
6.	Ozkaya et al. (2015)	Quantitative	Market knowledge competence	Customer and supplier competence	Market-based innovation	Positive and significant.
7.	Storbacka and Nenonen (2015)	Longitudinal case study	Dynamic capability	Learning with market	Marketing innovation	
8.	Muddaha et al. (2018)	Quantitative	Dynamic capabilities	Marketing knowledge management, innovation process management and organizational learning	Marketing innovation	Mixed findings

## **5.0 The Need for Consolidation of Dynamic Capabilities – Innovation Research**

According to Gupta et al. (2014), though, dynamic capabilities is drawing support in the strategic management literature, however, empirical studies remain relatively rare. Consequently, Barrales-Molina et al. (2015) contended that dynamic capabilities research is ripe for consolidation considering the theoretical debate and abstraction of specific organizational processes the field has generated, as well as dearth of empirical studies.

Although, scholars have produced a substantial amount of literature on dynamic capabilities – competitive advantage research (Albort-Morant et al., 2016), as the concept of dynamic capabilities was developed to compliment the effect of intangible resources on competitive advantage of firms (Teece et al., 1997), and contribute to repertoire of knowledge on how firms perform differently in the dynamic business environment (Teece, 2007). However, little is known in relation to dynamic capabilities – innovation research (Froehlich et al., 2017; Albort-Morant et al., 2016; Forés & Camisón, 2016). Similarly, though, there is a universal argument on the positive influence of dynamic capabilities on competitive advantage of business enterprises (Karna et al., 2015). Still, literature is limited on the influence of dynamic capabilities on marketing innovation of SMEs (Zhou et al., 2017).

Nevertheless, dynamic capabilities have differential performance outcome (Tepic et al., 2014). In addition, Ricciardi et al. (2016) argued that the predictive influence of dynamic capabilities is paradoxical. Again, Froehlich et al. (2017) and Barrales-Molina et al. (2015) claimed that the model of dynamic capabilities that involves sensing, integration, learning and coordination as integral components, did not satisfactorily explain the micro foundation application of dynamic capabilities. Thus, suggesting for future research effort to explore more on how micro foundation application of different sets of dynamic capabilities impact innovation or competitive advantage of firms in a dynamic business environment.

Also, despite the fact that previous studies have examined the relationship between market knowledge competence and market-based innovation (Ozkaya et al., 2015), innovation process management capability and innovation (Froehlich et al., 2017), as well as learning with market and marketing innovation (Storbacka & Nenonen,

2015). Yet, literature is scanty on the combined relationship between these dynamic capabilities and marketing innovation of SMEs (Muddaha et al., 2018). Nonetheless, Froehlich et al. (2017) emphasized that the influence of dynamic capabilities on innovation is as path dependent, as other internal and external context specific factors such as absorptive capacity (knowledge management capability) and learning based practices (organizational learning capability) may have an influence. Therefore, suggesting the need for future research to incorporate a wider range of dynamic capabilities into the model and empirically examine their influence of on other aspect of innovation performance of SMEs.

## **6.0 Conclusion - The Need for Testing Influence of a Moderator in Dynamic Capabilities**

Though, literature provides extensive evidence on how dynamic capabilities enhances competitive advantage, performance and innovation, still, the influence of dynamic capabilities on these independent constructs remain controversial (Karna et al., 2015). Similarly, while, several scholars in the dynamic capabilities – competitive advantage research suggested for direct influence of dynamic capabilities (Karna et al., 2015; Teece, 2007). Nevertheless, other researchers do not support this notion because though, dynamic capabilities can alter resource base of an organization, but, do not necessarily result to competitive advantage and also, cannot create any rare, valuable, inimitable and none substitutable resources (Pavlou & El Sawy, 2011). Thus, suggesting an indirect influence of dynamic capabilities.

Correspondingly, Froehlich et al. (2017) contended that the influence of dynamic capabilities on innovation is described as path dependent, as other internal and external context specific factors may have an influence. Thus, suggesting for testing the influence of a moderating variable in the dynamic capabilities – innovation research. Equally, Albort-Morant et al. (2016) have suggested for testing the effect of environmental dynamism in dynamic capabilities – innovation research. Accordingly, Zhou et al. (2017) recommended for research investigation on effect of environmental dynamism as moderator in dynamic capability – innovation research.

Although, the moderating influence of environmental dynamism on the relationship between dynamic capabilities and competitive advantage (Schilke, 2014), as well as, a specific dynamic capability (new product development) and operating capabilities (Pavlou & El Sawy, 2011) has been established. Notwithstanding, literature is yet to establish the moderating influence of environmental dynamism on the relationship between marketing knowledge management capability, innovation process management capability, organizational learning capability and marketing innovation of SMEs. Moreover, literature has shown that the influence of dynamic capabilities is paradoxical (Ricciardi et al., 2016), and also, its influence on innovation is path dependent (Froehlich et al., 2017). Thus, Zhou et al. (2017) and Albort-Morant et al. (2016) suggested for future research to empirically examine the effect of environmental dynamism as a moderating variable in relation to the dynamic capabilities – innovation research. Accordingly, García-Zamora et al. (2013) established that environmental dynamism exerted positive influence on marketing innovation performance of SMEs. Likewise, scholars such as Donate and Canales (2012) and Lai et al. (2014) have suggested for further research investigation on the effects of environmental dynamism as a moderator.

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