# New Causal Model for Brazilian Private Higher Education Institutions:
## A Dynamic Capability Perspective

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## ABSTRACT

The purpose of this paper is to extend knowledge of enterprise architecture and the importance of the operating model of a firm through a Dynamic Capabilities perspective. First, the authors attempt to position Private Educational Institutions in an operating model. They propose a model that relates enterprise architecture to the dynamic capabilities approach. A questionnaire was prepared in accordance with the proposed structural equation model and was sent to 1,932 private universities. The results show a significant relationship between operational model dimensions and reconfiguring capability. This paper contributes with a better understanding of enterprise architecture regarding its strategic relevance to organizations, in particular to Educational Institutions. Dynamic Capabilities proved to be a relevant and promising concept for the study of Enterprise Architecture operating models. This implies that the reconfiguring capabilities in Enterprise Architecture project implementation are positively affected by the operating model of the institutions.

## KEYWORDS

## INTRODUCTION

The current dynamic and competitive market context has intensified the need to develop distinctive capabilities to promote a favorable environment for innovation and growth. Consequently, the focus on business agility and speed to the market has grown in recent years. In this sense, Enterprise Architecture can add value to organizations either through information availability or through resource optimization and organizational alignment (Richardson, Jackson, & Dickson, 1990; Pereira & Sousa, 2004; Kamoun, 2013). Regarding the education segment, the scenario and possibilities are no different. (Eacott, 2008).

Enterprise Architecture (EA) is the preparation for change provided by the fusion of business and information architectures. This is possible thanks to appropriate articulation of capabilities. Management plays a relevant role in the proper implementation of an EA project in an organization. As Tushman and Anderson (1986) pointed out, managerial activities include creating and deploying

internal and external capabilities. These activities imply both the reaction to changing requirements from outside as well as the measures taken inside to cope with these changes (Teece, Pisano, & Shuen, 1997; Ambrosini & Bowman, 2009). Gathering specific and valuable resources may not be sufficient to achieve competitive advantage, as research has shown. A necessary condition for success is effective managerial action regarding structuring and bundling resources into capabilities and, finally, leveraging these capabilities (Helfat et al., 2007; Sirmon, Hitt, Ireland, & Gilbert, 2011).

Following this reasoning, Kamoun (2013) claims that Dynamic Capabilities (DC) are the appropriate approach to managing EA implementation. DC provide articulation of resources and knowledge regarding the adaptation process through which EA needs to be orchestrated. The term Dynamic Capabilities (DC) was coined by Teece & Pisano (1994) and Teece et al. (1997). The authors define them as a firm's ability to integrate, build and reconfigure internal and external competences to address rapidly changing environments. As highlighted by Lee and Kelley (2008), the dynamic capabilities perspective can provide a useful theoretical lens for investigating innovation and organizational change. There is little empirical evidence to support the theoretical relationship between DC and EA. Abraham, Aier, & Winter, 2012 performed multiple case studies, but most researchers focus on theoretical framework proposals (Kamoun, 2013; Danesh & Yu, 2014). In this paper, we adopt the dynamic capabilities perspective in order to understand EA implementation.

While consisting of an empirical study in higher educational institutions, this paper depicts the prevalent operating model in Brazilian educational institutions, based on the framework of Ross, Weill and Robertson, (2006). In doing so, we provide a graphic view of how these institutions are positioned regarding business standardization and business integration levels. We then propose a causal model within the operating model's dimensions and reconfiguration capability, which is one of the main processes of dynamic capabilities.

Higher Education Institutions in Brazil have been facing intense competition lately. Several acquisitions and merges are occurring in this field, as well as an inflow of foreign capital (Oliveira, 2012). We highlight the relevance of the theme through this kind of context.

This paper begins with a theoretical background regarding enterprise architecture and dynamic capabilities. This is followed by an overview of the research design and methodology. We then present the main findings from the quantitative analysis and the implications of EA and DC in the study of higher education management. The paper draws to a close with the main conclusions and a consideration of the limitations of the study and suggestions for future research.

## THEORETICAL BACKGROUND

In this section, the dynamic capabilities approach and enterprise architecture are discussed. Firm reconfiguration capabilities and the consequent impact on firm performance are then addressed. Thus, the relevant literature is outlined in order to conduct the research appropriately and achieve the objectives of the study.

### Dynamic Capabilities and the Reconfiguration Process

The concept of dynamic capabilities was introduced by Teece and Pisano (1994) and Teece et al. (1997) to reflect the fact that, in a dynamic environment, a firm's competitive advantage lies in its capability to exploit its resources, internal processes and routines to leverage its organizational competencies. In strategic management, the dynamic capabilities approach is considered a potential integrative approach that will enable a better understanding of how firms create and sustain a competitive advantage.

The Dynamic Capabilities approach maintains that resources are sources of competitive advantage (Collis & Montgomery, 1995). The DC approach was created to clarify how a resource basis is reconfigured in a changing environment. Consequently, DC extends the Resource Based View concept by emphasizing that the firm's competitive advantage does not stem from the possession of strong resources and capabilities, but lies in its capability to adapt, integrate, reconfigure and renew these

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