Abstract

In the face of disruption, adaptation and innovation by organizations that perform critical functions in the economy, such as the provision of electricity, public transportation, and health care, are essential for sustainability. Large, complex organizations face significant barriers when innovation has implications for the organization’s architecture. In this paper, we address how such organizations succeed in overcoming these barriers, even when innovation raises the risk of organizational failure. We draw on insights about organizational routines and from stakeholder theory to outline a process by which absorptive capacity can be actively managed within large, complex core infrastructure organizations. We propose the concept of a negotiated settlement among stakeholders as critical to the innovation and adaption process. In a negotiated settlement, stakeholders develop understandings of the consequences of innovation for claimancy rights, and trade formally and informally to accomplish a mandate for change in the face of core threats to the organization's survival. By generating demand for innovation, this mandate constitutes an active component of absorptive capacity. We outline the implications of such a process for management theory on absorptive capacity and architectural change, as well as practical implications for organizations and the inter-institutional systems in which they are embedded.
The adoption of innovations that lead to changes in organizational architecture poses substantial risks to large, complex organizations with longstanding and often ossified relationships between organizational units (Henderson & Clark, 1990; Ansari, Garud & Kumaraswamy, 2016; Ansari & Krop, 2012). Yet in many infrastructure industries such as transportation, energy provision, and health care, organizational failure would have unacceptably adverse humanitarian consequences (Kapoor & Lee, 2013, McGahan 2004). As a result, many such organizations have resisted fundamental change altogether because the risks posed by the prospect of adopting architectural innovations in large, complex organizations include wholesale failure (Christenson, 2006; Danneels, 2010, Markides 2006, O’Reilly & Tushman, 2013). This problem raises a critical question for management scholars: How can large, complex, infrastructure organizations achieve the architectural change required to support the adoption of breakthrough innovations while minimizing the risk of organizational failure during the innovation process (Adner 2012; Gnyawali & Park, 2011, O’Reilly and Tushman, 2013)?

This question has been raised by scholars who study the capacity of large organizations to absorb innovation (Cohen & Levinthal, 1990; Garud, Jain, & Kumaraswamy, 2002, Garud & Munir, 2008, Lane, Koka, & Pathak, 2006; Lichtenthaler, 2009), as well as by theorists examining the roles of stakeholder engagement and joint production in organizational functioning and change (Blair & Stout, 1999; Klein, Mahoney, McGahan, and Pitelis, 2012). The separate evolution of the absorptive capacity and stakeholder theory literatures has left open an opportunity to integrate knowledge of stakeholder concerns into the conceptualization of absorptive capacity.

This paper seeks to advance synthesis between theories of absorptive capacity and stakeholder engagement. Our contribution is to explicate how the analysis of stakeholder value,
and subsequent efforts to achieve a negotiated settlement among stakeholders, provides a mechanism by which absorptive capacity may be actively managed in large, complex organizations, increasing the likelihood of successful adoption of innovations with architectural implications. The negotiated settlement constitutes a mandate for change, and thus represents the generation of demand for innovation that is partially constitutive of absorptive capacity.

We focus on large, complex organizations that constitute, in part, the core infrastructure of economic society. These organizations, including banks, hospitals, and energy providers, function as essential components of inter-institutional systems of social and economic exchange. Wholesale failure among such organizations could have catastrophic system-level consequences (Mahoney, McGahan, & Pitelis, 2009). At the same time, failure to adopt new and emerging technologies puts these organizations at increasing risk of obsolescence over time (Klein, Mahoney, McGahan, & Pitelis, 2017). Such organizations resist architectural change – often out of an aversion for failure – but must eventually adapt despite the risk of failure that accompanies change. This paper offers a theoretical framework for resolving this tension.

To generate novel insights into processes for enhancing absorptive capacity and architectural innovation in these complex organizations, we begin by reviewing concepts of organizational routines and organizational capabilities (Nelson & Winter, 1982; Nelson & Winter, 2002; Shreyogg & Kleisch, 2007). In so doing, we make three primary contributions. First, we identify and expand upon the crucial challenge of developing demand for innovation within a complex organization that is characterized by an ossified architectural design. Second, we advance the idea that this demand is constitutive of absorptive capacity and can be constructed by stakeholders. In making this argument, we draw on recent research on absorptive capacity that extends the construct beyond its original formulation as an artifact of research and
development. Finally, we define the negotiated settlement among stakeholders as the mechanism for developing a mandate for architectural change in complex organizations. This mandate constitutes demand for innovation, and is thus essential to the activities that represent absorptive capacity. We then outline the research agenda generated by these insights.

Our argument is built in five stages. First, we clarify the specific type of organizations on which we are focused, using the work of Perrow (1984) as a foundation. We describe Perrow’s concepts of “interactive complexity” and “tight coupling” in the context of literature on organizational routines and capabilities to better understand the nature of large, complex, core infrastructure organizations. We then define and describe the implications of the interdependence of complex organizations in inter-institutional systems, and examine how innovations that achieve architectural change might be possible while preventing organizational failure. A critical facet of the argument is that the failure of these types of organizations has extensive and adverse social consequences that stakeholders strive to avoid.

Second, we describe the challenge of architectural change for large, complex organizations. Architectural innovation is, paradoxically, both essential for organizational survival and a threat to organizational survival. Resistance to change arises in part from entrenched relationships between organizational units (Abernathy & Utterback, 1978; Suarez & Utterback, 1995) that have amassed important capabilities. We define the concept of an “ossified organizational architecture” in terms of these rigidities. We argue that architectural innovations are essential for these complex organizations in order to assimilate new technologies and keep pace with changing market demands (Henderson & Clark, 1990; Klein et al., 2017). The challenge involves maintaining the core capabilities possessed as assets while enabling the evolution of activities required to adopt innovations for architectural change (McGahan, 2004).
Third, we clarify the concept of absorptive capacity. Although this construct has been taken up widely in organization and management studies, commentators have noted the lack of analytic clarity that has characterized the diverse uses of it (Zahra & George, 2002; Lane, Koka, & Pathak, 2006). Building on the foundation of organizational routines, we draw on Lewin, Massini and Peeters’ (2011) discussion of the micro-foundations of both internal and external absorptive capacity routines to inform our use of the absorptive capacity construct, providing a conceptual foundation for our application of stakeholder theory (Lewin, Massini, & Peeters, 2011). This foundation accommodates the idea that absorptive capacity may be actively constructed rather than emerge only as an artifact of research and development.

Fourth, we summarize literature on the stakeholder theory of the corporation and articulate the relevant features of this literature for our argument. The summary emphasizes the importance of implicit and incomplete contracting of enfranchised stakeholders in a team-production approach to complex core infrastructure organizations (Klein et al., 2017; Klein et al., 2012; Blair & Stout, 1999, p. 250). Building on the centrality of enfranchised stakeholders’ claimancy rights from a property rights perspective, we outline the necessary considerations to enable a negotiated settlement among stakeholders. We assert that the institutional interests and legitimate claimancy rights of diverse stakeholder groups at the inter-institutional level are consequential for whether and how newly acquired knowledge and innovation is converted to architectural changes in organizational design.

Finally, we bring these literatures together to describe the negotiated settlement among stakeholders as a mechanism for achieving a mandate for architectural change. This mandate constitutes an active component of absorptive capacity that enables large, complex organizations to convert newly adopted innovations into architectural changes. By securing agreement among
relevant stakeholders at the organizational and inter-institutional levels to reconsider their claimancy rights in order to enhance the value of the organization’s activities and to avert Figure 1. The development of ossified organizational architectures.

Routines coalesce into organizational capabilities over time, which both cause and are caused by the ossification of communication channels, information filters, and problem-solving strategies. These processes lead to ossified organizational architectures, which exhibit tight coupling and interactive complexity in the large, complex core infrastructure organizations on which we are focused.
Enfranchised stakeholders engage in formal and informal trades of value to generate a mandate for change, which constitutes the negotiated settlement. The negotiated settlement enables the adoption of innovation, which leads to an equitable shift in stakeholder value and claimancy rights, in order to achieve architectural change.
References


