Entrepreneurial entry into established ecosystems:
An investigation of strategies adopted by digital health entrepreneurs

(Work in Progress)

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In this study, we examine how digital health entrepreneurs enter and succeed within established ecosystems, which are networks of interdependent firms that produce products or services that together comprise a valuable whole. Within ecosystems, firms create value by collectively providing all of the components that comprise the final product. At the same time, they also compete to capture that jointly created value. To succeed, firms must thus find and occupy a valuable niche – that is, a position in which they can simultaneously create value with and capture value relative to their partners (Pierce, 2009; Hannah and Eisenhardt, 2016). While this is understood in general, gaps remain with respect to how firms can do so.

Prior research offers three perspectives on ecosystem strategy. One stream looks at strategy within nascent ecosystems in early states of formation. They tend to be uncertain and dynamic settings, with unclear component boundaries and unknown participants (Santos and Eisenhardt, 2009; Hargadon and Douglas, 2001). As a result, a key strategic challenge for firms in nascent ecosystems is to assemble the components and coordinate the partners required to create value. For example, Ozcan and Eisenhardt (2009) explore how game publishers brought together previously disconnected firms in media, telecoms, and software in order to launch the wireless gaming ecosystem. A key insight is that to succeed, firms must convince partners to join them by proposing a unique and mutually valuable vision for the new ecosystem.

A second stream of research looks at competition within established ecosystems. In contrast to nascent ecosystems, the participants of established ecosystems typically have well-defined roles, and the relationships between participants and components are known (Hannah and Eisenhardt, 2016; Jacobides et al, 2006). Research has examined a number of issues within established ecosystems, including the alignment of incentives between participants (Casadesus-Masanell and Yoffie, 2007; Adner, Chen, and Zhu, 2015), impact of technological challenges on firm performance (Adner and Kapoor, 2010; Hannah and Eisenhardt, 2016), and the strategies by which firms can maintain bargaining power relative to their partners (Jacobides and Tae, 2015; Jacobides et al, 2015). Overall, a key insight in this work is that in order to succeed, firms must be relatively “irreplaceable” in the ecosystem – that is, they must occupy a valuable role.

A third stream of research looks at ecosystems-as-structure approach (e.g. Adner, 2017, 2006, 2012), which takes an activity-centric view of interdependence. In this approach, the ecosystem starts with a value proposition and seeks to identify the actors needed for the value proposition to materialize. The key strategic challenge in this approach is mutual agreement among the actors about their positions in the ecosystem and the interactions. However, little is known about how alignment of actors occurs in an established ecosystem, particularly given the actors’ different end goals.
Overall, existing research 1) highlights the importance of coordinating to create value in nascent ecosystems, and 2) identifies the characteristics of attractive positions in established ecosystems. In contrast, less is known about how firms can identify partners to deliver a new value proposition in established ecosystems. In particular, how and when can entrants reconfigure or reassemble existing participants in order to create additional value, while simultaneously carving out a valuable new niche for themselves? Several recent studies suggest that this may be possible. For example, Hannah and Eisenhardt (2015) explore how consumer finance firms reconfigured the existing participants of the residential solar industry (e.g., installers and panel manufacturers) into a novel ecosystem. Similarly, Gurses and Ozcan (2015) explore how entrants were able to co-opt a subset of the participants of the US television industry in order to create a niche for pay TV providers. But while illuminating, these studies leave open the question of when these strategies are viable, and how they allow firms to succeed more generally. With this in mind, this study asks: how can entrepreneurial entrants successfully achieve alignment to a new value proposition among players in an existing ecosystem and carve out a niche for themselves?

Research Setting and Method

Given limited prior theory on the strategic actions undertaken by entrepreneurs to introduce new technologies into risk adverse and regulated ecosystems, we adopted an inductive, multiple case qualitative research design. A multiple case research design is ideal since it allows for more robust and generalizable theory building (Eisenhardt, 1989).

The research setting is the managed healthcare setting. This is an appropriate setting for this study for three reasons. First, it is a rich ecosystem composed of several distinct participants, such as, hospitals, physicians, and patients. This makes the process of identifying and coordinating participants particularly salient. Second, new regulation changes in the healthcare system required a change in the patterns of interactions in the ecosystem to achieve value-based care. To the extent that ecosystem strategy is a function of achieving alignment between key players, how can an entrant do so? The risk adverse nature of the healthcare ecosystem makes introducing new technologies, patterns of interaction or activities particularly difficult: participants may be highly risk averse or reticent to experiment with new technologies. Thus, formulating and implementing an effective ecosystem strategy becomes particularly important. Finally, recent advances in mobile technology and electronic data management have introduced rich opportunities for redefining the existing managed healthcare ecosystem. Various entrepreneurial entrants have begun to exploit these advances by developing novel patient management technologies. The healthcare setting thus offers a unique opportunity to examine re-alignment of an established ecosystem in real time.

We have included eight entrepreneurial entrants in this study. These firms are based in seven US states, and were founded between 2009 and 2014. All eight digital health entrepreneurial firms have developed similar technology solutions for facilitating care coordination between patients and healthcare providers. However, these firms have embarked on different strategies for working with existing ecosystem actors.

Interviews and archival data analysis are underway. We rely on a number of different data sources, including semi-structured interviews with (1) startups’ founders and team members, (2) startups’ clients, investors and board members, and (3) industry experts and (4) archival data on each
startup, including the startup’s websites, business publications, press media release, blog posts and social media feeds. For analysis, a replication logic will be used to either confirm or disconfirm emerging patterns and relationships within each case (Yin, 1994). For each startup, we interview three to four of each startup’s founding team and other team members, four clients and two external stakeholders, such as board of directors and investors. Interviews with multiple informants help capture the variety of actions, perceptions and meanings of key actors involved in strategy formulation and implementation. Archival data is also used to help capture the evolution of strategy, and triangulate against the interview responses to reduce informants’ retrospective bias.

**Preliminary Findings**

Preliminary findings reveal a disconnect between regulatory initiatives and alignment of actors needed for the value-based-care value proposition to materialize. Broadly, existing regulatory initiatives emphasize the need for alignment amongst the key actors to coordinate care across actors but provide little guidance on how to do so. The regulatory initiatives impose financial penalties on healthcare facilities with poor patient outcomes post treatment or medical visit. The technology designed by the digital entrepreneurs begins to facilitate care coordination between patients and clinicians, but face low use amongst clinicians and patients. The entrepreneurs in our sample thus identified alternative ways to align the actors in the ecosystem and grow. These strategies include tying use of the technology to physician ratings to achieve alignment at the individual level and partnering with other less active partners in the ecosystem who can participate in the care coordination process. The findings also reveal challenges of scaling the technology across disease states and identifying the right actors to approach. For instance, physician-led entrepreneurial firms in our sample were observed to be as likely as non-physician led firms to face setbacks and pivot in their strategies.

**Proposed Contributions**

This study will contribute to theory and practice. Prior research has yet to explore how digital health entrepreneurs can enter and succeed within established ecosystems. The output of this study will be a theoretical framework that describes how they entrants are able to do so: how they develop and advocate a vision of the industry, how they “sell” the vision to prospective partners, and how they ensure their own ability to occupy a valuable niche in doing so.

This study will also contribute to practice. In particular, there is a massive surge of interest today in “disrupting” healthcare delivery. According to Frost & Sullivan, the care coordination software market is expected to grow at a 26.1% compound annual growth rate between 2015 and 2020. However, the context offers challenging barriers, especially because of the highly regulated environment and risk adverse nature of stakeholders in the industry. The healthcare ecosystem is particularly difficult to navigate due to the complexity of care delivery, the need for collaboration amongst multiple stakeholders and compliance with regulations. This project will extend our understanding of the challenges digital health entrepreneurs face at the ecosystem level and how they navigate these challenges.
Works cited


