Technovation 39-40 (2015) 14–25

Contents lists available at ScienceDirect

Technovation

journal homepage: www.elsevier.com/locate/technovation

Collectively created opportunities in emerging ecosystems: The case of solar service ventures

Harald Overholm

University of Cambridge, Institute for Manufacturing, 17 Charles Babbage Road, Cambridge CB3 0FS, UK

ARTICLE INFO

Available online 4 February 2014

Keywords:
Entrepreneurial opportunity
Business ecosystem
New ventures
Entrepreneurship
Service venture
Product-service system

ABSTRACT

This study suggests that in the entrepreneurial communities of emerging industries, individual entrepreneurs may simultaneously create opportunities that spill over to others and discover opportunities already created by others. Extant opportunity literature, focused on single actors and their personal networks or on the information function of market prices, is largely mute on the role of opportunities in value networks with distributed entrepreneurial efforts. Ecosystem theory, a literature stream that seldom intersects opportunity literature, contributes with a conceptual framework to study the question. The paper seeks to shed light on how opportunities are created or discovered by new ventures as they are involved in the interlinked endeavor of forming a new ecosystem.

The study examines five case studies of US ventures in the early phase of the solar service industry, an industry in which entrepreneurs offer customers access to solar panels as a service rather than as a product. These ventures inadvertently created an industry ecosystem together, as they could not protect the value created by their business partners' new knowledge, or by the emerging social webs between partners. They shaped opportunities together, passing value back and forth amongst themselves. This paper offers fundamental observations on how opportunity creation and discovery is distributed among a community of entrepreneurs as a business ecosystem grows.

© 2014 Elsevier Ltd. All rights reserved.

1. Introduction

A critical question for many new ventures is how to orchestrate a complex network of counterparties. In this context of complexity, opportunity can be both created and discovered. As new ventures form their initial networks, they leave two traces they cannot protect – a cognitive one (a blueprint for what a functional network should look like for their type of value creation), and a practical one (educated partners to fill a role in such a network). For the next venture entering that market, there may be opportunity to discover in these existing network structures and actors. Yet each new venture will likely have to create its own unique network configuration. A collective and distributed entrepreneurial effort, in which opportunity is passed back and forth between similar actors, may be an important process through which new markets grow.

Ecosystem literature (e.g., Adner, 2006; Moore, 1993; Nambisan and Baron, 2012) provides a useful theoretical lens with which to describe this phenomenon and to integrate it into opportunity studies. Business ecosystems are networks of actors engaged in joint value creation. Ecosystems consist of both highly interdependent business actors, dependent on each other for survival, and more detached but still critical parties such as regulators and policy-makers. The ecosystem concept contributes with a new level of opportunity analysis, lacking from current opportunity discourse with its focus on single entrepreneurs, private social networks and price functions in markets.

This paper examines how opportunities are passed between entrepreneurs in the same ecosystem. To address this question, a conceptual framework integrating ecosystem and opportunity analysis is created to guide the empirical work, and five rich qualitative case studies of new ventures building ecosystems in the US solar service industry are studied. Entrepreneurs in that industry offer customers access to solar panels as a service rather than as a product, effectively selling only electricity to the end-customer, and have opened up a new mass-market for an advanced technology product through their innovative business model.

2. Theoretical background

2.1. Opportunity literature

A critical endeavor for entrepreneurs is to identify and select appropriate opportunities relating to what product or service to bring into which market (Ardichvili et al., 2003). This fundamental insight has implications for research on entrepreneurship. Opportunity

E-mail address: Harald@cantab.net

0166-4972/$ - see front matter © 2014 Elsevier Ltd. All rights reserved.
http://dx.doi.org/10.1016/j.technovation.2014.01.008

research has grown to become a pivotal field of inquiry within entrepreneurship studies, and some see it as an overarching framework for all understanding of entrepreneurs (Dutta and Crossan, 2005; Eckhardt and Shane, 2003).

Much of the literature on opportunities discusses whether opportunities are created or recognized by entrepreneurs (Short et al., 2010; Vaghely and Julien, 2010). Often writers take a middle ground, recognizing that most opportunity discovery contain an element of creation and vice versa, and that there is iteration between the two modes over time (Ardichvili et al., 2003; Dutta and Crossan, 2005; Short et al., 2010; Vaghely and Julien, 2010). Yet writers working in a discovery tradition tend to focus their work on objectively existing imperfections in markets (e.g., Eckhardt and Shane, 2003), assuming that fundamental opportunities exist independent of entrepreneurs (Alvarez and Barney, 2007; Dutta and Crossan, 2005). Entrepreneurs may identify these opportunities through information gathering, alertness to market changes (e.g., Ardichvili et al., 2003) and new application of their previous knowledge (e.g., Shane, 2000). Writers in the creation school instead center on the creative entrepreneurial process of reconfiguring and rethinking current reality in order to shape opportunities for business creation (Alvarez and Barney, 2007). According to such writers, the opportunity fundamentally emanates from the individual (Alvarez and Barney, 2007) who enacts his or her will on reality – a social constructivist (Dutta and Crossan, 2005) or subjectivist position.

Opportunity studies have traditionally been focused on the individual entrepreneur (Ardichvili et al., 2003; Eckhardt and Shane, 2003) or entrepreneurial firm (Vaghely and Julien, 2010) as a unit of analysis. Opportunities and individuals are typically viewed as the two principal components of opportunity and entrepreneurship research – in the words of Dahlqvist and Wiklund (2012, p. 194), “there is increased consensus in the entrepreneurship literature that entrepreneurship takes place at the nexus of profitable opportunity and enterprising individuals”.

The literature has remained largely mute on the question of how opportunities are created or recognized in networks where entrepreneurial efforts are distributed. Although social networks are often mentioned (Ardichvili et al., 2003; Kor et al., 2007), this is typically on a personal level, as a source of information for the entrepreneurial individual. For example, Dutta and Crossan (2005) discuss how personal network connections affect opportunity recognition as they provide feedback to entrepreneurs on early business plans. Others have noticed how opportunities are shaped indirectly by earlier entrepreneurs, as entrepreneurial actions change market prices and lead to diffusion of new information (Buenstorf, 2007; Dahlqvist and Wiklund, 2012; Eckhardt and Shane, 2003).

Some have called for increased focus on opportunity studies at aggregated levels, yet still within organizations. For example, Dutta and Crossan (2005, p. 440) state that “much of the existing literature on entrepreneurial opportunities and the field of entrepreneurship itself have been overly concerned with the individual to the detriment of ignoring the possibilities of entrepreneurial activities occurring at the group and organization levels”.

No mention has been found in the literature of the question this paper sets out to examine – how opportunities are passed between entrepreneurs through evolving ecosystems. Yet Buenstorf (2007, p. 324) indicates an awareness of the basic dynamics of this question when he finds that “the development of an industry naturally leads to the creation of new opportunities; it also tends to bring about new potential entrepreneurs capable of pursuing these opportunities”.

Understanding of the process through which a community of entrepreneurs gives rise to a new industry through individual and collective action emerges as a novel and important topic for the opportunity literature.

2.2. *Ecosystem theory*

A business ecosystem is a theoretical construct closely linked to the broader area of interorganizational networks (e.g., Powell et al., 1996) or alliance portfolios (e.g., Ozcan and Eisenhardt, 2009). The ecosystem construct is often used to depict a network aiming specifically for joint value creation (Adner, 2006; Moore, 1993; Nambisan and Baron, 2012) in order to highlight the structure of interdependence and resource flows in the network (Adner and Kapoor, 2010; Adner et al., 2012).

The business ecosystem concept emerged with a seminal article by Moore (1993) aiming to describe economic communities and innovative value creation through a new lens that would be more specific than the classic industry concept (Moore, 1993; Moore, 2006). The actors in Moore's ecosystem are the firms directly involved in shared value creation, and stakeholders such as governments and regulators (Moore, 1996). Moore (2006) has argued in a later article that “modern business thinking” only need be concerned with three units of analysis – markets, intraorganizational hierarchies, and ecosystems.

These ecosystems are brought together by their actors' shared vision of value creation (Moore, 1993) and sustained by an interdependency stemming from a constant need for network effectiveness (Moore, 1996). The partners of this exchange network often compete and cooperate simultaneously (Afuah, 2000; Moore, 1996).

Ecosystem thinkers (e.g., Adner and Kapoor, 2010; Maine and Garnsey, 2006) have described how a counterparty often must solve innovation challenges of its own before it can participate in a joint value offering with an innovative venture. These innovation challenges do not have to be of technological nature – they can be “rooted in discovery, design, and development – in integrating external components into firms internal designs, or in scaling up production or delivery” (Adner and Kapoor, 2010, p. 310). The process of solving such challenges in order to establish a tie is often called co-innovation (Adner and Kapoor, 2010).

Ecosystem theory is a burgeoning area for analysis, and shows many gaps. For example, little ecosystem research deals with new ventures (exceptions being Garnsey and Leung (2008) and Nambisan and Baron (2012)) or how new ecosystems are formed. Furthermore, the literature on business ecosystem thinking seldom intersects opportunity literature. No academic work interlinking the two literature streams have been identified in the literature review for this article.

2.3. *Conceptual framework*

A theoretical framework based on extant literature can ensure that emerging theory is grounded in propositions and constructs that have been shown to be useful and meaningful in prior work (Eisenhardt, 1989; Yin, 2009). The conceptual framework will provide a preliminary guide for data collection, and is meant to be revised or extended based on empirical findings and shaped into the new theory emerging from the study.

This paper aims to examine how opportunity creation or recognition can be a process taking place in an exchange in between socially unconnected ventures, rather than stemming from individual or firm-specific thinking, information exchange in private social networks, or price information from open markets. The ecosystem concept can provide a theoretical construct helping to formulate how opportunity pass in between entrepreneurs in emerging industries.

A party that pioneers an ecosystem influences other parties to co-innovate and to organize themselves in order to participate in joint value creation. The structure of interdependence in this ecosystem,

Download English Version:

https://daneshyari.com/en/article/1021820

Download Persian Version:

https://daneshyari.com/article/1021820

Daneshyari.com