BUSINESS MODEL CHANGE AND NETWORK CREATION: EVIDENCE FROM BERLIN START-UPS

JÖRG SYDOW
Freie Universität Berlin
School of Business & Economics
Department of Management
Boltzmannstr. 20, 14195 Berlin, Germany
joerg.sydow@fu-berlin.de

THOMAS SCHMIDT
Freie Universität Berlin, Germany

TIMO BRAUN
Technische Universität Kaiserslautern, Germany

INTRODUCTION

In this paper we argue that entrepreneurship should not only be conceived as organization-creation but as network-creation. Analogous to organization-creation (Gartner, 1985), the creation of an interorganizational network which often accompanies it, can be conceptualized as a non-linear process, stabilized and reconfigured with the help of business models generating a common understanding of value creation and appropriation.

Following a constitutive view (Garud, Gehman, & Giuliani, 2014a) on entrepreneurial network processes, we assume that business models play a central role in structuring the constitution of entrepreneurial ventures including their networks, not only reflecting but also orientating the creation and appropriation of value via linkages. Business models do not only incorporate relationships in many of their dimensions (Baden-Fuller & Haefliger, 2013), but have been described as performative "devices" (Doganova & Eyquem-Renault, 2009), "models" (Baden-Fuller & Morgan, 2010), "recipes" (Sabatier, Mangematin, & Rousselle, 2010) or "conceptual models" (Teece, 2010) that help, during the entrepreneurial process, to create not yet existing organizations and networks. As we know little about the constitution process of entrepreneurial networks and the role of business models for network-creation, we articulate the following research question: *How do business models shape the constitution of inter organizational networks in the entrepreneurial process of organization-creation?*

Using a qualitative methodology, we analyze eleven cases of organization- and network-creation, applying narrative interview techniques and ethnographic research instruments (Elliott, 2005). Based upon the comparative analysis of these cases, we develop a typology of new ventures which make creative use of interorganizational networks. The typology encompasses five idealized trajectories between "pure" organization-creation and "pure" network-creation. With our constitutive view we are not only able to capture and describe these extreme trajectories within our typology, but also the area between them. In our analysis, business model artifacts and narratives turn out to be important devices for development along the idealized trajectories. Despite this, we also find that business models can become important devices which may help to escape a trajectory and redirect the organization- and/or network-creation.

CONCEPTUAL BACKGROUND

The conceptualization of entrepreneurial network processes has been discussed controversially in previous research. As Slotte-Kock and Coviello (2010) conclude from their review of the literature, most conceptualizations in this research field are linear, implying a certain degree of teleology or life cycle logic. For example, an early strictly linear model of entrepreneurial network development was proposed by Butler and Hansen (1991), who describe how (1) social networks turn into (2) business focused networks, before they evolve into (3) strategic networks. Schutjens and Stam (2003) find that there are different evolution patterns for upstream and downstream relationships. In the model of Larson and Starr (1993), entrepreneurial networks increase their density over time, whereas Hite and Hesterly (2001) present an approach whereby density decreases during the evolution of entrepreneurial networks. As ventures develop from emergence to early growth, network management becomes more professional, and social cohesion will gradually be replaced by rather "calculative" arm's length relations. These different models seem to contradict each other, but once we discard the idea of linearity, we can see that there might be many alternative ways of network creation and evolution. If we allow recursiveness into our conceptualization of network development (Ring & Van De Ven, 1994), we can use a "conceptual basis" that "allows for the network to be viewed as either a dependent or independent variable (or both)" (Slotte-Kock & Coviello, 2010: 35). Elfring and Hulsink (2007), for example, explored the role of starting conditions and innovativeness for the adding *and* dropping of entrepreneurial ties.

In the face of such process characteristics and related contingencies, we position our research within the growing literature on constitutive perspectives within entrepreneurship research (Garud et al., 2014a; Garud & Giuliani, 2013). Constitutive views grounded in Giddens' (1984) structurationist ideas, for instance, emphasize not only the idea of networks being always a medium and an outcome of agency. Instead, they consider network constitution as an outcome of (inter-)organizationally embedded practices (Sarason, Dean, & Dillard, 2006); practices that are initiated and reproduced by actors such as the entrepreneur, with the help of structures. With this view, we join Garud and colleagues in moving beyond the dualism between actor-centric and context-centric perspectives that have focused either on an entrepreneur's social capital (Florin, Lubatkin, & Schulze, 2003) or on the surrounding network (Andersen & Drejer, 2008). Furthermore, we also move beyond the distinction between opportunity-discovery (Lingo & O'Mahony, 2010) and opportunity-creation (Sarason et al., 2006); i.e. the notion that entrepreneurial network opportunities are either found in or made with the help of entrepreneurial networks.

The more we adopt an organization-creation perspective and put emphasis on the non-linearity of entrepreneurial network processes, the more we have to acknowledge that entrepreneurial organizations and networks are not objectively given, but socially constructed and dynamically shaped. For this reason alone, we are interested in the role of business models, which, in their representation as social narratives and artifacts (Doganova & Eyquem-Renault, 2009), may help agents to structure these processes. In particular, we want to use the business model concept to solve the puzzle of non-linearity in network-creation.

Business model research is still a young field of study and views vary, for example, on whether a business model is more (Teece, 2010) or less generic (DaSilva & Trkman, 2014) than a firm's strategy, or whether a business model is intertwined (Casadesus-Masanell & Ricart, 2010) with technology or not (Baden-Fuller & Haefliger, 2013). However, despite these differences, all major streams discuss issues of interorganizational cooperation more or less explicitly, when emphasizing, for example, the role of strategic networks (Zott, Amit, & Massa, 2011) or value chain linkages (Baden-Fuller & Haefliger, 2013).

At their core, business models specify either explicitly or implicitly (1) “how a company makes money” and (2) “where it is positioned in the value chain” (Chesbrough & Rosenbloom, 2002: 533; Teece, 2010). While the first point is especially important for the mobilization of financial resources with the help of images of the value creation process, the latter point is crucial for communication with suppliers and customers. Business models are embodied not only in artifacts like business plans or power point slides, but also in narratives that are used for internal and external communication and mobilization (Doganova & Eyquem-Renault, 2009). All these dimensions of a business model give orientation to entrepreneurship not only as organization-, but also as network-creation. For example, when the monetization model includes the licensing of complementary assets (Gans & Stern, 2003; Teece, 1986) to franchisees (Baden-Fuller & Haefliger, 2013: 13), this has strong implications for both organization- as well as network-creation; it implies that complementary assets are to be owned by the focal firm (organization-creation), and that there will be strong franchisor-franchisee relationships coordinated by a more hierarchical rather than heterarchical form of governance (network-creation). The reason why business models are so important for a new venture creation process is that they *promise* to provide “recipes for creative managers” (Baden-Fuller & Morgan, 2010: 156; Sabatier et al., 2010), not least with respect to the creation of not yet existing organizations and interorganizational networks.

However, even though the interorganizational dimension has often been implicitly or explicitly discussed within business model literature (Zott et al., 2011), interorganizational networks, as opposed to more recent research on entrepreneurship (Leyden et al., 2014), have rarely been at the theoretical core of this research. Only recently, information system researchers have begun to discuss business models with a stronger theoretical focus on the inter-organizational level. In their research commentary, Rai & Tang (2014) identify different network-related intents that can be incorporated into a firm’s business model, e.g. “achieve supply-chain efficiencies” to increase cost advantages, or “generate complementarities” to increase indirect network effects with partner firms. The authors differentiate thereby between three value creation mechanisms (“novelty”, “efficiency”, “complementarity”) and three value appropriation mechanisms (“bundling”, “lock-in”, “barrier to imitation”) (see also Zott & Amit, 2010) which support the interorganizational intent incorporated in a business model. We consider these categories of value creation and appropriation useful to analyze the interorganizational dimension of business models and how they relate to the entrepreneurial process. However, these mechanisms cannot be sufficiently explained with information technology. In this regard, we follow Teece (2010), who stated that business models like the “razor/blade”-model existed long before the occurrence of information technology.

Against this background, we propose to analyze business models as narratives that relate social and material elements (Garud et al., 2014a). This includes such models helping to create internal (organization-creation) and external (network-creation) linkages. What is more, business models are the kind of entrepreneurial narrative (Lounsbury & Glynn, 2001; Martens, Jennings, & Jennings, 2007; Zott & Huy, 2007) that enables a linkage of internal and external elements by specifying the connecting value creation and appropriation mechanisms. Business models can thereby stabilize the trajectories of organization- and network-creation (progression), when adding and strengthening internal and external linkages (Elfring & Hulsink, 2007). However, a change in business models might also motivate the dropping and reconfiguring of internal and external linkages (regression), until a new business model stabilizes a new trajectory of organization- and network-creation.

So far, the literature on business model change (Björkdahl, 2009) and business model innovation (Amit & Zott, 2001; Chesbrough, 2010) has been silent about the interorganizational dimension of this reconfiguration process. Our study will therefore help to shed light on the interorganizational performativity of business models and analyze how business model experimentation (McGrath, 2010) interacts with their interorganizational (in-)completeness (Dahan, Doh, Oetzel, & Yaziji, 2010).

RESEARCH DESIGN

Despite the amount and quality of research carried out since Birley's (1985) seminal study on the role of networks in the entrepreneurial process, no study – to the best of our knowledge – has as yet investigated the start-up of a business in terms of organization- *and* network-creation. Thus, in order to explore this complex, potentially multifaceted process, a qualitative multi-case study approach to research is adopted (Eisenhardt, 1989). More specifically, a narrative approach (Elliott, 2005) was chosen to capture the performative dimension of business models in the process of organization- and network-creation. Narrativity was relevant in two ways: first, we used "retrospective narrativity" (Selden & Fletcher, 2010) as an interviewing technique. Second, we analyzed the role of the "practical narrativity" of business models for organization- and network-creation in the qualitative analysis of interview data and the data from ethnographic observations.

Eleven narrative case studies were conducted in the metropolitan region of Berlin between 2011 and 2015. For the last few years Berlin has been considered Germany's "start-up capital" following London, the hot spot in Europe for high-tech ventures: of the total amount of venture capital that was invested in Germany in 2012, more than 50 per cent was raised by new ventures from Berlin (BITKOM, 2013); with 145 venture-capital financed start-ups during the last eighteen months, Berlin is second in Europe, headed only by London with 187 cases (Ernst & Young, 2014).

The firms studied are overwhelmingly knowledge-intensive university spin-offs. The sample is far from representative, even for the Berlin region, as we followed a theoretical sampling approach (Eisenhardt, 1989), and deliberately only chose cases that had at least one interorganizational relationship of significant importance when creating the organization. None of the analyzed ventures has reached a stage of stability or maturity yet (Hite & Hesterly, 2001; Kazanjian & Drazin, 1989), e.g. self-reported growth rates (in sales, employees and/or network partners) are still high in all cases.

The triangulation of primary and secondary process data in our case study database allowed us to reliably reconstruct the history of each case in terms of organization- and network-creation and in terms of business model change. The different dimensions of development were juxtaposed in spreadsheets for each case, so that we could identify critical changes and how they related to each other. For each case we reconstructed, for example, how the number of employees and the number of partner firms changed over time. This allowed us to determine the degree of organization- and network-creation. In order to relate these dimensions of development to business model change, we analyzed how business models were embodied in narratives and artifacts and how these business model embodiments changed over time. Based upon our analysis, we positioned all cases within a two-dimensional typology of organization- and network-creation. The slope of the arrow symbols indicates whether the identified trajectory of organization/network-creation came closer to "pure" organization-creation or "pure" network-creation.

EMPIRICAL RESULTS

Our analysis indicates, unsurprisingly, that strong or medium business model change always influenced the degree and quality of organization- and/or network-creation. We selected the three cases that were most extraordinary in terms of their degree of network-creation (*Kappa* and *Alpha*) and/or in terms of their business model change (*Theta*).

From the very beginning, the founder of *Kappa* ("pure" network creation) substituted a possible organization-creation activity by network-creation. According to German law, a corporation (limited with shares) has to employ at least one person. According to the *Kappa* founder, that was the only reason why he made himself the executive director, even though his ambition was a 100 per cent virtual corporation with no employees at all. His beverage mail-order business became an egocentric network, where almost all parts of the value chain (production, logistics, sales, marketing, and accounting) are outsourced to long-term partner firms. *Kappa* can therefore focus entirely on the orchestration of these external "components" (Faltin, 2008), at the same time remaining the broker in the middle, careful that network members do not get to know each other too well to ensure that the venture does not lose its privileged brokering position. The important network ties are long-term relationships to beverage producers, packaging suppliers and logistics service firms.

Alpha's business model was network-orientated from the very beginning (leveraging network-creation by organization-creation). However, the scale and scope of the network approach to entrepreneurship were changed to a large extent. In the beginning, *Alpha* was founded as a multi-party joint venture, planned to become a network orchestrator for their shareholders: several IT service providers invested to create a new organizational entity. These service providers were partially existing firms and partially start-ups, newly founded by involved serial entrepreneurs. The business model narrative that mobilized the different parties to invest in the common joint venture was that *Alpha,* as the newly founded network orchestrator, would allow them to stay small and agile, but at the same time to bundle their complementary competencies and to reduce market risks. In order to realize the creation of this whole new network with its marketing, sales and partner management function, organization-creation was needed to a significant extent. Office space was rented in several cities all over Germany and experienced staff was hired to support network-creation. A medium shift in network-creation could be observed two years after the foundation of *Alpha*, when more and more IT service providers were interested in joining the network.

In contrast to *Kappa* and *Alpha*, *Theta*'s business model did not include a high degree of network-creation in the beginning. *Theta* was founded by three serial entrepreneurs and computer game enthusiasts who built a group buying platform for computer games, game controllers and other physical goods as an integrated firm. The value creation mechanism of the original business model was efficiency-driven: with a group buying platform, *Theta* bundled the demand of many end customers and met the intent of game suppliers to sell large quantities. The volume discount was passed on in parts to the end users, increasing the loyalty of the customer community. However, within the first year it turned out that their online marketing branch was more successful than their core business. The business model was therefore gradually shifted from physical to non-physical – and more importantly: from organization- to network-creation. *Theta* found out, furthermore, that their successful online marketing approach for online games was also transferable to mobile devices, and many different complementary business models appeared on the horizon in this rapidly growing field of online games marketing. Through interaction with internal and external entrepreneurs, *Theta*'s business model was fundamentally re-narrated: *Theta* became a company builder, a "platform for entrepreneurs" wanting to start a business in collaboration with *Theta*. Within the first three years, eight new ventures were founded within *Theta*'s network. In most cases, these start-ups are joint ventures between *Theta* and external entrepreneurs.

BUSINESS MODEL CHANGE AS MEDIATOR OF NETWORK-CREATION

The analysis of our cases demonstrates that business models in network-creation can be best seen as conceptual models about value chain linkages embodied in artifacts and narratives. Often these specific models are derived from popular business model wisdom like the "razor/blade"-business model (Teece, 2010) or industry-specific business model analogies like the "value added reseller"-business model (VAR) in the enterprise software sector.

With a business model, entrepreneurs can not only communicate effectively with potential stakeholders, in particular with investors. Having explicit or implicit hypotheses about how to create and capture value is in fact also a precondition for mobilizing partners for network-creation. What we see in our cases is that business partners are mobilized to enter the entrepreneurial networks when they see the *interorganizational fit* between their business models and the business model of the new venture. Analogies like "razor/blade" or the "group buying model" provide conceptions about how partners would fit into or complement the newly created network.

We found that business models are relevant for organization- and network-creation in two different ways and – surprisingly – these two functions could not be more distinct: when an organization- and/or network-creation develops along a trajectory, business models provide structure, orientation, and consolidation. But business models can also intervene and change "the rules of the game" by moving from one trajectory of organization- and network-creation to a completely different one. These creative leaps in organization- and network-creation are *entrepreneurial* in the best Schumpeterian sense: they combine people, organizations and networks in novel ways that can provide competitive advantages (Zott & Amit, 2007).

REFERENCES AVAILABLE FROM THE AUTHORS