Research Policy 38 (2009) 1545–1558

Contents lists available at ScienceDirect

Research Policy

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

The relational antecedents of project-entrepreneurship: Network centrality, team composition and project performance

Simone Ferriani[a,1], Gino Cattani[b,2], Charles Baden-Fuller[c,*]

[a] Dipartimento di Scienze Aziendali, Università di Bologna, Via Capo di Lucca 34, 40126 Bologna, Italy
[b] Department of Management & Organizations, The Stern School, NYU, Tisch Hall, Suite 7-14, New York, NY 10012, United States
[c] Cass Business School, City University, 106 Bunhill Row, London EC1Y 8TZ, UK

ARTICLE INFO

Article history:
Received 8 October 2008
Received in revised form 17 August 2009
Accepted 1 September 2009

Keywords:
Project-entrepreneur
Network centrality
Team composition
Commercial performance
Feature film industry

ABSTRACT

The relational antecedents of project-based enterprises have not yet received systematic investigation. These ventures are typically created by individual freelancers who are usually embedded in networks of collaborative relationships that convey the information and resources required to carry out new projects. Using a relational perspective of entrepreneurial discovery and team composition, we analyze the performance determinants of project-entrepreneurs, namely the individuals who are responsible for launching and carrying out those projects. We argue that project-entrepreneurs' performance is related to their degree of centrality within the social network, and their familiarity with the selected project-team as captured by the distribution of ties among team members. We test our hypotheses within the Hollywood Film Industry over the period 1992–2003. The findings point to the existence of diminishing returns to centrality and performance benefits from assembling teams that combine old-timers and newcomers. The theoretical contributions and implications of the study are discussed.

1. Introduction

Project-based organizing of company operations have become pervasive in today's economy. Research in this area has been primarily focused on projects as temporary organizational configurations for allocating personnel and resources within stable firms (Hobday, 2000; Davies and Brady, 2000; Prencipe and Tell, 2001). Yet, besides the use of projects as coordinating mechanisms within established companies, project-based organizations, whereby the company is little more than a set of contracts that ceases to exist once the project is completed, can be found across a wide range of industries. Alternatively referred to as single-project organizations (Baker and Faulkner, 1991), market organized projects (Lorenzen and Frederiksen, 2005) or project-based enterprises (DeFillippi and Arthur, 1998), these temporary ventures (henceforth project-based enterprises) are especially common in the context of market-based freelance contracting, where they are deliberately created for a limited time and purpose. In order to cope with highly dynamic environments wherein product demand shifts rapidly and unpredictably, project-based enterprises bring together specialists to work as a team and provide their expertise to a specific task, and neither party has any expectation of continued employment or cooperation after the successful completion of that goal (Bechky, 2006). Industries where project-based enterprises are widespread include: music (Peterson and Berger, 1971), movies (Baker and Faulkner, 1991), software (Ibert, 2004), television (Windeler and Sydow, 2001), construction (Eccles, 1981), and new media (Grabher, 2002).

With their emphasis on unique outputs and stable work roles, these "highly singular" (Whitley, 2006) organizations have a few distinctive features. They have limited lives devoted to producing a singular objective or goal, they typically grow to their full-size almost immediately after founding and get disbanded very rapidly when the project ends, and their leaders are engaged in a serial fashion forming new projects as fast as existing ones finish. In contrast, more traditional firms have longer lives, typically evolve to full-size over a long period of time and their leaders are generally able to focus on the current organizational challenges without the fear of being unemployed in the very near future. Because project-based enterprises leaders are engaged in launching and organizing projects in a serial manner, we label them *project-entrepreneurs*.

What makes project-entrepreneurs particularly intriguing from a theoretical standpoint is that they have to rewire these temporary ventures whenever new project-opportunities emerge. As a result, they are exposed repeatedly to problems and tasks typical of the entrepreneurial process. Indeed, project-entrepreneurs face two critical challenges that invariably characterize the creation

* Corresponding author. Tel.: +44 20 7040 8652.
E-mail addresses: simone.ferriani@unibo.it (S. Ferriani), gcattani@stern.nyu.edu (G. Cattani), C.Baden-Fuller@city.ac.uk (C. Baden-Fuller).
[1] Tel.: +39 0512098086.
[2] Tel.: +1 212 998 0264.

0048-7333/$ – see front matter © 2009 Published by Elsevier B.V.
doi:10.1016/j.respol.2009.09.001

of a new venture: locating the right opportunity to launch the project venture and assembling the most appropriate team to exploit that opportunity effectively (Venkataraman, 1997; Shane and Venkataraman, 2000). Resolving the first challenge requires project-entrepreneurs to access an extensive range of information needed to seize new investment opportunities. Resolving the second challenge requires assembling a collaborative team that has to fit well with the particular challenges of the project and has to function almost immediately to reduce the risk that performance might be adversely affected (Whitley, 2006).

Finding lucrative opportunities and assembling effective teams are two crucial conditions that have to be met consistently in order for project-entrepreneurs to be successful in the long run. Because each output is unique, delivered in a context of flux in which "elements are combined, taken apart and recombined in a continuous process of organizational formation and dissolution" (Baker and Faulkner, 1991: 283), this task is far removed from the repeated problem-solving effort that characterizes stable organizations—which typically draw more heavily from well established routines to guide their search for solutions (Levitt and March, 1988). As Whitley pointed out (2006: 81): "The more singular are outputs, the more likely that organizations will have to deal with exceptions to their routines and adjust to variations in materials and the work environment." Given the drives for uniqueness and innovation of each new project, choices among alternative lines of action involve a high degree of experimentation and "feel" (Faulkner and Anderson, 1987: 880).

Extant literature has not investigated the project-entrepreneurial challenge, either in the entrepreneurship or the project management literatures. The former has examined serial entrepreneurs (MacMillan, 1986), but not in "singular" project settings. The latter has been largely dedicated to the study of projects as intra-firm administrative configurations for coordinating and organizing standing personnel. As a result, we still know very little about the determinants of project-entrepreneurs' success (DeFillippi and Spring, 2004). Where do project-entrepreneurs tap the information required to locate attractive project-opportunities? How can they increase the likelihood of assembling successful project-teams? What resource combinations ultimately drive the project-entrepreneur's success in the face of high uncertainty?

We address these questions by drawing from research on social networks and team-assembly mechanisms to develop and test a conceptual model predicting the performance of project-entrepreneurs. We start by observing that project-entrepreneurs are part of a vast network of collaborations originating from the ongoing process of creating and dissolving relationships that bring new project-opportunities to fruition. We suggest that this complex network, which is the result of past collaborations and the medium through which future collaborations develop, acts as a repository of information. Since the identification of valuable opportunities hinges on access to private information, social networks play a vital role in providing conduits through which this information flows (Granovetter, 1973; Coleman, 1988). Accordingly, we predict that project-entrepreneurs located at the centre of these collaboration networks are more likely to identify attractive project-opportunities because they have a better sense of the options that are available within the field. However, we expect to observe diminishing returns to centrality as social ties take effort to form and the ability to manage multiple relationships faces cognitive limits (Hansen et al., 2001). By bringing together insights on team coordination (Edmondson et al., 2001) and repeated social interaction (Jones et al., 1997), we also anticipate that project-entrepreneurs will be better off by assembling teams that combine past collaborators and newcomers. Teams with both common and diverse experiences will enjoy the benefits of shared understanding to effectively exchange knowledge and unique perspectives to support innovation. Accordingly, we predict that project-entrepreneurs' performance is a function of the project-entrepreneur's familiarity with the selected team members as captured by the distribution of ties between previous collaborators and newcomers.

We test our hypotheses in the context of the US feature film industry over the period 1992–2003. The break-up of the Hollywood "Studio System" from the mid-1950s onwards is a prime example of a shift from hierarchical organization to project-based working (Storper, 1989). Though a few major corporations still control film distribution, Hollywood hosts one of the world's most entrepreneurially oriented production networks. In this context, the project-entrepreneur typically is an independent producer whose main task is to identify suitable project-opportunities and pursue them by assembling teams of free agents best suited to those jobs (Jones and DeFillippi, 1996). Our paper focuses on how movie producers' structural position within the social network, as well as the composition of the team they assemble, affects their commercial performance as measured by movies' box office receipts.

2. Theory

2.1. Project-entrepreneurs and new project-opportunities: the role of network centrality

When project-entrepreneurs decide to embark on a new venture they are faced with a typical entrepreneurial problem. They need to identify a project opportunity that embodies sufficient profit potential to more than compensate for the opportunity cost of forfeiting alternative investments, a liquidity premium for the time and capital to be invested, and a premium for risk bearing. They also must organize the resources needed to bring that opportunity to fruition (Shane and Venkataraman, 2000). How do project-entrepreneurs identify promising opportunities for their next project? Where do these opportunities come from? A vast tradition of entrepreneurial research grounded in the Austrian Economics School suggests that the answer to these questions rests with the distribution of information among individuals (Hayek, 1945). As they possess different information, individuals recognize opportunities that others cannot yet see. Indeed, social actors can be expected "[. . .] to differ considerably in the information they possess . . . Such differences in information . . . typically imply differences in positioning relative to new opportunities" (Denrell et al., 2003: 985). These informational idiosyncrasies create opportunities for the project-entrepreneur (Kirzner, 1973, 1997).

Although information can obviously be tapped through a variety of non-social ways (e.g., changes in domain-focus, literature, new education, etc.), several studies in economic sociology suggest that most of the exposure occurs through social networks. A large body of empirical evidence on diffusion and social influence attests to the importance of social networks as conduits for the transmission of private information (Coleman et al., 1957; Granovetter, 1973; Coleman, 1988). As Gulati pointed out (Gulati, 1995: 623–624): "That social networks are conduits of valuable information has been observed in a variety of contexts, ranging from interpersonal ties. . . to interlocking directorates. . . The common theme throughout this body of research is that the social networks of ties in which actors are embedded shapes the flow of information between them. . ." Hence, to the extent that project-entrepreneurs occupy heterogeneous positions in networks as a result of their transition from project to project, their access to this information varies. And to the degree that better access to private information generates greater awareness of available opportunities differences in network position can partly explain inter-individual variance in the ability to locate lucrative opportunities (Sorenson and Stuart, 2004).