

**INTRODUCTION TO THE SPECIAL ISSUE  
ON ECONOMICS AND STRATEGY  
OF ENTREPRENEURSHIP**

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This special issue is the outgrowth of a 2007 conference, *Entrepreneurship: Strategy and Structure*, sponsored by the NBER Working Groups on Entrepreneurship and Innovation Policy and the Economy. The aim of the conference and special issue are to provide a forum for rigorous frontier research on the microeconomic and institutional foundations of entrepreneurship, and the strategic and market consequences of entrepreneurial activity. The papers included in the Special Issue include a subset of papers presented at the conference as well as papers submitted as the result of a solicitation for the Special Issue from the journal. As with all special issues in *JEMS*, all of the articles in this issue have gone through the standard editing and refereeing process that is applied to all submissions to *JEMS*. We would especially like to thank Dan Spulber, Josh Lerner, and Bob Strom for their help throughout the process, and the Kauffman Foundation for providing support for the original NBER conference.

Although traditional research in economics has mostly ignored entrepreneurship, or otherwise equated it with a mechanism for finding market equilibrium, economists have made considerable progress more recently in understanding the economic foundations and consequences of entrepreneurial activity. Applying frontier theoretical and empirical

tools of modern economics, this emerging literature focuses on entrepreneurship as an economic process of self-interested strategic agents interacting in environments marked by a high level of uncertainty and incomplete information. Rather than taking entrepreneurship to be exogenous, the decision to become an entrepreneur is grounded in the underlying microeconomic environment, and both the structure and performance of entrepreneurial firms depend on the strategic and institutional setting. Systematic research along these lines impinges on related research in numerous fields, including the economics of innovation, industrial organization, finance, labor economics, urban economics, organizational economics, and even economic sociology. Although this range highlights the diversity of phenomena that come together in the study of entrepreneurial companies, the research shares the common objective of providing a deeper understanding of the drivers of entrepreneurial strategy and the causes and consequences of the structure of entrepreneurial activity. Looking over the collection of papers included in this Special Issue, we would argue that the “new economics of entrepreneurship” is no longer in its infancy, but is now an active and rapidly growing field.

We loosely organize the papers in the Special Issue into four broad themes:

- The impact of the local environment and requirements for entrepreneurship
- Strategic interaction between entrepreneurs and more established firms
- The structure of entrepreneurial finance
- The structure of entrepreneurial organizations.

In introducing the individual papers, we emphasize these themes and note some crosscutting insights from the studies.

The first set of papers focuses on the impact of the local environment and requirements for entrepreneurship. Glaeser and Kerr (2009) focus on the local determinants of entrepreneurship within manufacturing. Although industry-specific or region-specific studies have emphasized particular factors in isolation, Glaeser and Kerr (2009) draw on detailed data from the U.S. Census' Longitudinal Business Database to distinguish between the relative salience of multiple potential drivers of entrepreneurship across a wide range of industries and locations. Though their findings are limited to the manufacturing sector, they highlight the role of a large number of small suppliers and the presence of industries using similar types of labor as important drivers of entrepreneurial investment. Whereas small upstream suppliers and knowledge flows seem to be particularly important for smaller entrants,

larger entrants are sensitive to a wider range of drivers, including more general input conditions. More generally, these results highlight the significant role of local conditions in entrepreneurship and the importance of favorable input conditions for entrepreneurship requiring significant upfront investments.

Giannetti and Simonov (2009) offer a complementary perspective by evaluating the impact of selection into entrepreneurship arising from social interactions and relationships with other entrepreneurs. Although prior research has established that entrepreneurship by a given individual is more likely in an environment with a higher number of entrepreneurs, Giannetti and Simonov (2009) focus on untangling the mechanism behind this relationship. In particular, if peer effects in entrepreneurship are the result of higher marginal productivity, then communities characterized by a high rate of entrepreneurship should also be associated with higher monetary returns to entrepreneurship; conversely, if peer effects result from nonpecuniary benefits, social communities associated with a high level of entrepreneurship should be associated with low relative returns to entrepreneurship. Using an extremely detailed survey of Swedish households that includes information about the decision to become an entrepreneur as well as income, and exploiting an identification approach that allows them to overcome the “reflection” problem, Giannetti and Simonov (2009) offer persuasive evidence that the returns to entrepreneurship are lower in those neighborhoods and social groups with higher rates of entrepreneurship. These findings suggest that the propensity and consequences for entrepreneurship must account for the fact that entrepreneurship may involve significant nonpecuniary benefits, and that these benefits may be grounded in the local microeconomic and social environment.

Baumol et al. (2009) evaluate how the conditions and requirements for breakthrough entrepreneurship and innovation have changed over time. Specifically, motivated by the casual observation that many prominent entrepreneurs received little formal education, Baumol et al. (2009) evaluate the formal educational attainment of breakthrough entrepreneurs and innovators. Combining a number of different sources to establish a dataset of famous inventors and entrepreneurs over time, Baumol et al. (2009) find that both entrepreneurship and innovation tend to be associated with a high level of educational attainment, and the level of educational attainment for both groups is increasing over time. Perhaps most intriguingly, the educational attainment of prominent inventors is significantly higher than the educational attainment of prominent entrepreneurs. The analysis of Baumol et al. (2009) make an important contribution to an emerging body of evidence that the

human capital required to innovate at the frontier is increasing over time. It also raises the possibility that this “burden of knowledge” is more salient for technical inventors than market-focused entrepreneurs. More generally, the analysis raises the important (if difficult to answer) question: while most formal education has only a limited application to entrepreneurship, what type of educational system could best support an entrepreneurial economy?

The second group of papers in the volume considers the nature of strategic interaction between start-up innovators and more established firms. Cockburn and MacGarvie (2009) consider the impact of patent thickets in the software industry on the ability of technology entrepreneurs to attract venture and IPO financing. With the rise of patenting in the software industry, a contentious policy debate has arisen over the ability of established firms to use the patent system to raise entry barriers and the transaction costs of entering software markets. Cockburn and MacGarvie (2009) develop a novel dataset that allows them to track the entry and financing of entrepreneurial ventures, as well as exit, across a range of software markets. They are able to exploit the fact that software markets vary in terms of the size and complexity of the underlying patent thicket and that software markets experienced a shift in the level of protection afforded by software patents. Cockburn and MacGarvie (2009) find significant evidence that patent thickets are indeed associated with a decline in the financing of entrepreneurial ventures. This effect is concentrated among those firms that do not have intellectual property themselves. Their paper makes an important contribution to an emerging body of research, which suggests that the nature of strategic interaction between start-up and established firms in the product market has an important effect on the level and timing of entrepreneurial investment.

In a related vein, Simcoe et al. (2009) examine whether standard-setting organizations play different roles for entrepreneurial versus established firms. Specifically, in the information and communications industries, formal standard-setting organizations play a key role in coordinating the development of technology platforms. An important part of this process is the disclosure of patents to the standard-setting organization that impinge on proposed standards. Simcoe et al. (2009) document a striking pattern: patent disclosures by smaller (entrepreneurial) firms are associated with a much higher rate of patent litigation, while patent disclosures by established firms have no discernible impact on the propensity for litigation. These findings suggest that although larger firms may cooperate on standards and compete on the basis of implementation, smaller firms may be more aggressive enforcing intellectual property rights, as part of their strategy of generating

returns from innovation through licensing. More generally, both of these papers highlight the central role of strategic interaction between established firms and entrepreneurs in shaping the incentives for start-up innovation and the consequences of entrepreneurial investment.

The issues of strategy and structure in entrepreneurial companies are also highly relevant when it comes to finance. A growing body of evidence suggests that the choice of investor is closely linked to the technology and product market strategies of entrepreneurial companies. Venture capitalists, for example, are professional investors who can identify promising innovative companies and provide valuable advice and mentoring. Gompers et al. (2009) provide a fresh perspective, applying the tools of economics to the strategy of venture capital firms themselves. Gompers et al. (2009) ask which venture capital firms perform best, as a function of their investment strategies. An important dimension of the investment strategy is the degree of specialization. Being specialized exposes investors to significant industry risk, but helps them to gain deeper industry experience. The analysis of Gompers et al. (2009) shows that specialist outperform generalist, and that generalist teams are better off when they have partners that are individually specialized, even if the partnership as a whole covers a diversity of industries. This paper makes two important contributions. First, venture capital firms can themselves be analyzed as entrepreneurial organizations that make strategic decisions affecting their ability to create and capture value. Second, the paper refines our understanding of the relationships between entrepreneurial companies and their investors, making the important point that the value of venture capital investors depends on their level of industry expertise, and in particular the degree of specialization in the companies' industry.

The paper by Strausz (2009) further examines how investor knowledge affects the financing and structure of entrepreneurial companies. Strausz's (2009) theoretical model is based on the assumption that investors, including venture capitalists, can have information that is not available to the entrepreneur, such as information about the viability or marketability of an entrepreneurial idea. The main dilemma in this paper is that the investor's superior information can have not only a positive but also a negative effect. Specifically, favorable information spurs the entrepreneur to provide effort, but unfavorable information discourages the entrepreneur and worsens an underlying agency problem (modeled as an under-provision of private effort). The paper shows that the negative effect of information sometimes outweighs the positive, and that under certain circumstances the optimal information structure would involve partial information disclosure. Interestingly, the paper demonstrates that such partial information disclosure requires

centralization, so that one investor should provide both information and financing jointly. As a consequence, the paper provides a theoretical perspective on the structure of venture capital financing itself, and the underlying economic reasons why venture capitalist combine financing with the provision of value-adding advice.

The notion that more information does not always lead to better outcomes also pervades the final two papers in this special issue. These last two papers focus on the internal organizational structure of entrepreneurial companies. One of the fundamental difficulties of doing research on entrepreneurial companies is the lack of information available to researchers. This is because entrepreneurial companies are less transparent to outsiders than larger more established corporations. Although most researchers accept this as a fact of life, the paper by Almazan et al. (2009) actually asks the simple question: Why are start-ups less transparent than established companies? Their theory provides novel and important insights into the broader question of when transparency is economically undesirable. Almazan et al. (2009) consider a model where an entrepreneurial company has to make a fundamental structural choice about the generation of interim information concerning its prospects of success. Revealing interim information affects the demands made by stakeholders, such as the wages demanded by employees. The model recognizes the importance of heterogeneity among stakeholders, and explains why some stakeholders are able to extract rents from the new venture. A key insight of the model is that if the company generates more interim information, stakeholders can use that information to extract more rents. For example, a company that releases unfavorable news may be forced to pay higher wages, yet a company with favorable information may not be able to get away with lower wages. A key insight from the analysis is that not generating any interim information may give the entrepreneurial company the benefit of the doubt. More generally, the paper establishes why lack of transparency may be particularly valuable to entrepreneurial companies.

The benefit of limited information disclosure is also at the core of the paper by Daughety and Reinganum (2009). They consider a contracting problem between a buyer and a company that is composed of a team of two complementary entrepreneurs. In a standard moral hazard setting, there is a significant free-rider problem, where each of the two entrepreneurs provides too little effort to improve product quality. The main insight of the Daughety and Reinganum (2009) model is that in the context of an entrepreneurial company, there is a countervailing adverse selection problem. They consider the case where the buyer looks for quality signals because of imperfect information about the true quality of the product. If talent is unobservable but

effort observable, each entrepreneur will increase his/her effort to signal higher quality to the buyer. The need to prove themselves increases the efforts of both team members. As a consequence, a team of unknown entrepreneurs may actually outperform a team of entrepreneurs whose quality is fully known by the buyer. More generally, the model by Daughety and Reinganum (2009) shows that the limited transparency that is common in entrepreneurial companies can actually constitute an economic advantage.

In summary, the papers of this special issue have distinct implications for understanding the conditions under which entrepreneurship is likely to thrive, and how the institutional environment impacts the structure, strategy, and performance of entrepreneurial firms. They reflect an emerging body of theoretical and empirical papers, which provide a much firmer foundation to the economics of entrepreneurship. Outside of economics, there is a long tradition of documenting aspects of the entrepreneurial process. We believe that a defining characteristic of the new economics of entrepreneurship is to go beyond a descriptive analysis. All the papers in this special issue advance our understanding of the causes and consequences of entrepreneurial activity through rigorous theoretical and empirical reasoning about the structure of entrepreneurial activity.

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