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Essays on Angel Investing in the Entrepreneurial Ecosystem

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Abstract

Throughout its three chapters, this dissertation examines angel investing in the United States. Its main objective is to investigate the sociological mechanisms that underpin the decision by entrepreneurs to enter the angel investing market by becoming suppliers of capital, as well as their capital allocation choices, i.e. their investment decisions, and their outcomes. Empirically, this work relies on a combination of archival data—primarily from CrunchBase and LinkedIn—and fieldwork in the form of interviews with entrepreneurs and angel investors, as well as participant observation at the Angel Capital Association Annual Meeting in San Francisco.

Executive Summary

This dissertation comprises three chapters, which are tied together by their common focus on angel investing, as well as by a common data collection process. Taken together, the three chapters explore: a) entry into angel investing by entrepreneurs—that is, the decision by an entrepreneur to take up angel investing; b) investment decisions by entrepreneurs-turned-angels; c) angel investing outcomes and what might predict them. Empirically, the dissertation's main data source is CrunchBase, a crowdsourced online database which reports information on entrepreneurs, investors, funds, and new ventures, as well as on incubators and accelerators. This information is then supplemented with hand-collected LinkedIn information on each of the individuals—angels and entrepreneurs—in the sample, which allowed me to collect fine-grained information on location, career history and education. To refine my knowledge of the empirical setting and to gain relevant domain knowledge, I also collected qualitative data in the form of interviews with angel investors and entrepreneurs, as well as participant observation at angel group meetings and the Angel Capital Association annual meeting in San Francisco.

Angel investing has grown in importance and visibility in the past decade, both in the United States and in other nations, developed and developing alike. While the size of the angel market is difficult to estimate due to the lack of official figures, in the United States it was believed to be as big as the venture capital market in 2004: indeed, based on official figures business angels invested $23 billion in young companies, while venture capitalists invested about $20 billion. In 2014, after the global financial crisis, the total U.S. angel market was estimated to be worth $24.1 billion. In the past few years, angel investing has shown strong growth trends all over the world, with the European angel market doubling in size and the Canadian one tripling. An angel investor can be defined as “a person who provides capital, in the form of debt or equity, from his own funds to a private business owned and operated by someone else, who is neither a friend nor a family member”. In this regard, angel investors differ from venture capitalists, who typically do not invest their own money, and from friends-and-family investors, who provide capital to business run by family or other acquaintances. Contrary to popular beliefs, not all angel investors in the United States are located in Silicon Valley or in New York; while there is undoubtedly a degree of concentration around these two main metropolitan areas, angel investors can be found all over the country, and many of them invest locally. Many angel investors are also not “wealthy” in the conventional sense: based on 2004 data from the Entrepreneurship in the United States Assessment, the majority of angel investors (66.7 percent) fail to meet the $1 million minimum net worth required for SEC accreditation, and while 16.7 percent have a net worth over $2 million, just as many angel investors apparently have a negative net worth. While most angel investors have entrepreneurial experience, with 88 percent of them having started at least a company, they typically do not have more entrepreneurial experience than other informal investors; furthermore, most angel investors tend to be inexperienced investors. Finally, while most angel investors are white men, ethnic minorities tend to be overrepresented in angel investing relative to the general population, and women are just as likely as men to be business angels once other variables are accounted for. In all, the picture of angel investing in the United States does not fit the usual stereotype of the Silicon Valley millionaire leveraging his or her extensive entrepreneurial experience; rather, it is quite vibrant and diverse.

Why do angel investors decide to provide funding to entrepreneurs and their nascent ventures? Conventional wisdom suggests that the economic motive is the dominant force; that is, most angel investors decide to fund nascent ventures primarily to make money. A survey of 230 business angels in Germany finds support for this assertion, in that the desire to earn money and achieve superior returns was generally listed among the top four reasons for investing. It is not clear, however, whether angel investing is an effective way to achieve this vis-à-vis other types of investments. Indeed, recent evidence suggests that the returns to angel investing are “all but heavenly”, with about half of all angel investments losing money and 48% of investments resulting in a 100% loss. An empirical analysis of risk-adjusted returns on investment (ROI) as a function of funding stage reveals that there is an inverted U-shape relationship between funding stage and risk-adjusted returns, so that returns are highest in Series A and B but lowest at earlier and later stages of funding. Because an overwhelming majority of angel investments occur at the seed stage, it is therefore reasonable to assume that they are on average less profitable than other forms of investments in new ventures. Moreover, the vast majority of the profits from angel investing appear to be concentrated at the top, in the hands of well-connected veterans of high-growth industries. On the other hand, angels with less capital to offer and weaker links to expert advice are not especially likely to see high returns. This begs the question of why entrepreneurs might choose to pursue angel investing over other, possibly more lucrative opportunities. Otherwise stated, while the profit motive is certainly compelling, given the overwhelming odds of failure faced by most angel investors it stands to reason that it might be at best a partial explanation, and that other motivations of a different nature might come into play, In Chapter I, I then examine the process through which entrepreneurs become angel investors, as well as the reasons why they might choose to do so. While a majority of US-based angel investors are former entrepreneurs, what drives this career transition is not clear, especially given angel investing's average returns, which tend to be lower than venture capital in spite of angel investing being much riskier. Moreover, as far as theory is concerned, the social processes that govern entry into venture financing markets have received little scholarly attention, despite their importance for entrepreneurship. I make two sociologically-driven arguments: first, that entrepreneurs should be more likely to become angel investors when they have received angel funding themselves in the past. Further, I argue that this effect should be stronger under conditions of homophily—i.e. when entrepreneurs and the angels financing them are similar across one or more dimensions. Finally, the homophily patterns in venture financing I just described should be reproduced as entrepreneurs become angel investors and make their own funding decisions. My empirical results provide support for these arguments.

In the past few decades, entrepreneurship research has also increasingly recognized that individuals within entrepreneurial ecosystem move from position to position, and from role to role, in a rather fluid fashion. Indeed, not only do entrepreneurs often come from the private sector, often returning to it as employees at a later date; rather, individuals often move between being employees, founders, board members, and investors, often taking up multiple roles at once. Such role transitions, however, typically require a reconfiguration of knowledge, which comes with a redeployment of skills and talents. In the process, lessons learned through past experiences are transformed and adapted to new tasks, which likely poses different challenges to individuals with different professional profiles. Specialists with a narrow skillset might find adaptation to new roles more difficult, while those with a broader, less focused profile might find it easier. But how do individuals build on their experiences in previous roles as they take up new ones? And is having a focused profile detrimental or helpful to individuals looking to progress in their careers? Overall, the existing literature does not yet offer a comprehensive account of how success in one role might correlate to later success in other roles. Much in the same fashion, we also know little about whether and how specialization, vis-à-vis maintaining a generalist profile, might help or hinder career outcomes as individuals move from one career step to the next and transition across different roles. These issues are especially germane in the case of entrepreneurship ecosystems, given that in them: 1) individuals often occupy multiple different roles over the course of their careers, such as entrepreneur, employee and investor; and 2) generalist profiles often coexist with highly specialized profiles.

Chapter II, which is joint work with Dan J. Wang, then examines the antecedents of successful angel investing outcomes by entrepreneurs. Prevailing wisdom in the ecosystem holds that entrepreneurs are uniquely positioned to do well as investors, in that they possess tacit knowledge not just about their industry, but about the working mechanisms of venture financing, as well. Leveraging a sample of U.S. angel investors with entrepreneurial experience drawn from CrunchBase and linking their investment performance to their track record as entrepreneurs, show that while investing across market categories is associated with a higher number of successful exits in general, angel investors with broad entrepreneurial experience are found to do especially well. Success is also a function of effective knowledge translation: on average, successful entrepreneurs tend to become more successful angels, but we find this effect to be stronger the greater the overlap between the entrepreneurial experience of the founder and their angel investment portfolio.

Finally, most existing research on new venture creation has taken a somewhat “undersocialized” view of the process, often downplaying community-level, contextual influences. More recently, some studies have begun looking into this topic, yet even these have largely overlooked how community characteristics influence the emergence and evolution of venture financing processes. This is an important omission, because whether entrepreneurial ecosystems grow and thrive does not uniquely rest on entrepreneurship as a creating force. Venture financing is equally necessary, but the literature offer little insight concerning what might drive individuals and organizations to become suppliers of capital. In other words, for a thriving ecosystem to develop, founding and funding dynamics are equally important, yet existing work has predominantly focused of the former, at the detriment of the latter.

The third and final chapter of my dissertation, therefore, looks into the role played by social capital in the emergence of entrepreneurial ecosystem, once again with particular reference to angel investing. A useful starting point, here, is the growing scholarly recognition of the fact that entrepreneurial ecosystem dynamics are a function, at least in part, of the characteristics the social milieu in which they are embedded. Venture financing, in particular, can be seen a social process, insofar as it requires the development of relationships between one of more investors and the founding team. If this is the case, then community-level characteristics that catalyze and encourage social interaction could have a positive effect on the ecosystem. I therefore advance the argument that social capital could have a bearing on individual decision concerning entry into venture financing, as well as capital allocation choices. This is because both the decision to become an entrepreneur and the eventual, subsequent transition to angel investing are inherently social, and are therefore especially likely to occur in communities that are characterized by greater social connectedness. Furthermore, areas with more well-developed opportunity structures for socialization should also be especially conducive to the development of local financing relationships. In this study, I thus examine the role of community social capital in angel investing across Metropolitan Statistical Areas (MSAs) in the United States between

2005 and 2015. In so doing, I show that: 1) MSAs with greater social capital exhibit a higher density of VC-funded entrepreneurs; 2) in such MSAs, a greater proportion of this population of entrepreneurs will become angel investors; and 3) such areas are also characterized by a comparatively higher proportion of angel investments targeting companies within the same MSA. I then discuss the implications of my findings for the literature on community social capital in sociology, as well as for the broader scholarly understanding of entrepreneurial ecosystems.

Collectively, the three chapters the dissertation comprises represent my attempt to provide a comprehensive account of the phenomenon of angel investing in the United States. While this topic has received some attention in the literature, I believe that beyond its importance for entrepreneurship, the informal supply of capital phenomenon that angel investors exemplify should broadly be of interest to organizational scholars and economic sociologists alike, in that it configures an interesting empirical puzzle in a number of major ways. First, as I discuss at length in Chapter I, angel investing is time consuming while not being especially profitable. As far as capital allocation decisions go, it is therefore quite surprising to see it bloom into a market worth more than $20 billion in the U.S. alone, given the widespread availability of less time consuming alternatives with equal (or better) profitability. Second, angel investing is uniquely challenging for investors because of the objective lack of information they face in most circumstances. Because angel investors typically invest at the earliest stage and, in most cases, pre-revenue, not much is known about the objective value of the entrepreneurial idea or about the founding team's ability to implement it and execute it. As a result, angel investors routinely engage in a variety of uncertainty reduction strategies, such as seeking referrals from trusted connections and relying on specific rules of thumb. The informal supply of capital can thus be configured as being governed predominantly by social dynamics, which should make it an interesting empirical setting for scholars across disciplines. Third, the very emergence of a market for the informal supply of capital should in itself be surprising, since informal lending patterns have historically been associated with the lack—or the ineffectiveness—of formal institutions dedicated to this purposes, such as in the case of microfinance. It is then especially noteworthy, then, to see how the communities with higher social capital actually show more angel investing, and not less, as shown in Chapter III.

Overall, my research begins to address all of these puzzles by leveraging a variety of literatures ranging from organizational perspectives on learning, specialization, and the role of expertise to sociological topics like homophily, generalized reciprocity, and social capital. While the supply of capital has been extensively investigated by scholars in economics and finance for decades, it is my belief that economic sociology and organizational theory have much to offer when it comes to understanding this crucial component of the entrepreneurial ecosystem, and I hope that my research will pave the way for further work in this area.