



## Local bias in venture capital investments

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### ABSTRACT

This paper examines local bias in the context of venture capital (VC) investments. Based on a sample of U.S. VC investments between 1980 and June 2009, we find more reputable VCs (older, larger, more experienced, and with stronger IPO track record) and VCs with broader networks exhibit less local bias. Staging and specialization in technology industries increase VCs' local bias. We also find that the VC exhibits stronger local bias when it acts as the lead VC and when it is investing alone. Finally, we show that distance matters for the eventual performance of VC investments.

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## 1. Introduction

In practice, venture capital (VC) is not about the people you know but rather where you are: “FIBER networks cross the world. Data bits move at light speed. The globe has been flattened, and national boundaries obliterated. Yet...physical distance is very much on the minds of the investors who provide venture capital.”<sup>1</sup> Some VCs even make their investment decisions based on the “20-minute rule”, which is that if a start-up company seeking venture capital is not within a 20-minute drive of the VCs' offices, it will not be funded.<sup>2</sup> Generally speaking, both theoretical work (e.g., Kannianen and Keuschnigg, 2003, 2004; Schwienbacher, 2007) and empirical evidence (e.g., Sapienza, 1992; Sapienza et al., 1996, 2005; Lerner, 1995; Maginart et al., 2000, 2001, 2002, 2006; Davila et al., 2003; Engel and Keilbach, 2006; Jääskeläinen et al., 2006; Bruton et al., 2006; Mäkelä and Maula, 2007; Meuleman and Wright, 2006; Tian, 2007) are consistent with these observations in the recent popular press. However, prior evidence on local bias in venture capital markets has not fully investigated how local bias depends on VCs' characteristics. Further, whether and how local bias differs for VC markets versus other forms of financial intermediation has not been fully considered. As well, there is no or little empirical evidence on the performance implications of local bias, which should be important for the diversification/specialization issue in VC fund management (Knill, 2009). This paper aims to fill this gap.

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<sup>1</sup> Stross, Randall, “It's not the people you know. It's where you are.” The New York Times, 10/22/2006.

<sup>2</sup> *ibid.*

The strong bias in favor of domestic securities is a well-documented characteristic of investment in public equities. French and Poterba (1991) document that U.S. equity traders allocate nearly 94% of their funds to domestic securities, even though the U.S. equity market comprises less than 48% of the global equity market. This “home-country bias” exists in other countries as well. We note that home-country bias is different than the type of bias we study in this paper, as country bias may reflect patriotism and regulatory issues, unlike the case of U.S.-state-level analyses considered in our paper. The local bias we examine here is close to the definition in Coval and Moskowitz (1999, 2001). They find that among all domestic stocks, U.S. mutual fund managers prefer to own stocks of companies located nearby.

The extension of the analysis of local bias to VC and entrepreneurial markets is nontrivial and interesting for at least three reasons. First, there is a two-sided matching in VC finance whereby the VCs must select the entrepreneurs and likewise the entrepreneurs must also select the VCs (Wright and Lockett, 2003; Hsu, 2004; Engel and Keilbach, 2006; Dushnitsky and Lenox, 2006; Franke et al., 2006; Mäkelä and Maula, 2007). By contrast, mutual fund investments in publicly listed securities do not involve a two-sided matching.

Second, information asymmetry between new ventures and VCs is expected to be worse than investments in public firms (Gompers and Lerner, 1999). There are no SEC required documentations, no popular financial websites, and no recommendations by financial analysts to rely on for investment in private firms. Generally, VCs know about the available investment opportunities from businesses plans submitted by entrepreneurs, venture capital and entrepreneur conferences, and personal and organizational networks. Geographic distance between VCs and new ventures reduces the effectiveness of these channels, and thus affects the ability of VCs to access to high quality investment opportunities.

Third, VCs often require frequent in-person contact with entrepreneurs both before and after making the funding decision. Starting from submitting the business plan to successfully getting the funding from the venture capital fund, on average, the entrepreneur needs to have three to eight face-to-face meetings with the venture capital fund. Furthermore, physical distance restricts the ability of VCs to closely monitor entrepreneurs, for example, attending the board meeting, which is critical for reduction of the moral hazard problem (Lerner, 1995).

In view of these differences in entrepreneurship and markets for entrepreneurial finance, we theorize a number of hypotheses in this paper pertaining local bias in venture capital investments. We expect local bias to depend on characteristics of the VC in terms of reputation, staging activities, and syndication networks. We also expect local bias to be related to clusters of both entrepreneurial firms and VCs in a geographic region. Our predictions are outlined in Section 2 of this paper.

We use a sample of new ventures and VCs in the U.S. from 1980 to June 2009 provided by VenturExpert. We estimate the geographic distance between the VCs and each of its portfolio companies and compare the equally weighted-average distance of each VC's actual portfolio with that of a hypothetical industry and stage specific benchmark portfolio that a VC could have invested in a specific year.<sup>3</sup> The percentage difference is used as a proxy for the local bias in VC investments.

We find that VCs consistently exhibit significant local bias over the sample period. Various factors seem to contribute to the local bias in VC investments, including VC reputation, VC network, staging, industry specialization, syndication activities, and being the lead VC. Specifically, we find that more reputable VCs, in general, exhibit less local bias. We also show that VCs with broader networks and more geographically diversified networks exhibit less local bias. On the other hand, staging and specialization in technology industries increase the VCs' local bias. For VCs with similar reputation, network, staging activities, and industry specialization, we further show that being a lead VC and investing alone significantly increase the VC's local bias. Overall, these empirical findings suggest that distance is an important factor that impacts the VCs' investment decision as it increases information asymmetry and the cost of monitoring.

Furthermore, we find that some characteristics of the states where the VCs are located also impact the VCs' local bias. For instance, we find that the cluster of new ventures in the local area increases the VCs' preference to invest in local new ventures, while the competition among VCs in the local area decreases their local bias.

We further link the geographic distance to the performance of the VC's investments. We find that local ventures are more likely to have successful ultimate exits (IPOs or M&As) controlling for venture quality and VC reputation.

The remainder of the study is organized as follows. Section 2 describes relevant theory and develops empirically testable predictions. Section 3 describes the sample and data employed in this study. Section 4 develops measures of local bias in VC investments and examines whether there is local bias in VC investments. Section 5 analyzes the factors that contribute to local bias. Section 6 links the geographic distance to VC investment performance. Section 7 summarizes the main findings of this study.

## 2. Hypotheses

Scholars have offered two different rationales for the investors' preference for geographic proximity. First, Coval and Moskowitz (1999) suggest that investors have better access to information about companies located near them. “Local investors can talk to employees, managers, and suppliers of the firm; they may obtain important information from the local media; and they may have close personal ties with local executive—all of which may provide them with an information advantage in local stocks.” (p. 2046) Coval and Moskowitz (2001) link local bias to mutual fund performance and find that fund managers earn substantial abnormal returns in their geographically proximate investments. The average fund manager generates an additional return of 1.84% per year from her local investments above passive portfolios and earns 1.18% per year more than her distant holdings after

<sup>3</sup> As a robustness check, we also use a hypothetical market portfolio which consists of all new ventures that a VC investor could have invested as a benchmark to estimate local bias. The detailed description on the methodology is available in Section 4.2.

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