Journal of Business Venturing 25 (2010) 155–172

Contents lists available at ScienceDirect

Journal of Business Venturing

The role of top management team human capital in venture capital markets: Evidence from first-time funds ☆

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ARTICLE INFO

Article history:
Received 1 May 2007
Received in revised form 15 May 2008
Accepted 19 May 2008

Keywords:
Venture capital
Human capital
First-time funds
Investment management

ABSTRACT

This paper examines whether the human capital of first-time venture capital fund management teams can predict fund performance and finds that it can. I find that fund management teams with more task-specific human capital, as measured by more managers having past experience as venture capitalists and by more managers having past experience as executives at start-up companies, manage funds with greater fractions of portfolio company exits. I also find that fund management teams with more industry-specific human capital in strategy and management consulting and, to a lesser extent, engineering and non-venture finance manage funds with greater fractions of portfolio company exits. Perhaps counter-intuitively, I find that fund management teams that have more general human capital in business administration, as measured by more managers having MBAs, manage funds with lower fractions of portfolio company exits. Overall, measures of task- and industry-specific human capital are stronger predictors of fund performance than are measures of general human capital.

1. Executive summary

The rapid growth of venture capital as a source of financing for start-up companies and as a fraction of institutional investors' portfolios has made gaining an understanding of the determinants of venture capital investment performance an important objective. Prior studies have made progress in documenting some general features of venture capital investment performance.[1] However, there remain many questions about the underlying mechanisms behind the documented features of venture capital investment performance. In particular, how venture capitalists' human capital affects the performance of the investments they make and how differences in human capital of venture capital fund management teams may give some funds a performance advantage are two important outstanding questions.

In this paper, I collect data on the educational and work histories of venture capitalists who start first-time venture capital funds and use this information to test several hypotheses about the relation between venture capital fund management team human capital and venture capital fund performance. If venture capitalists' skills in managing a venture capital fund's investments matter we should see statistically significant correlations between measures of venture capitalist human capital and the performance of their funds. I test several hypotheses about the impact of task-specific, industry-specific and general human capital on venture capital fund performance.

☆ A previous version of this paper was circulated under the title "Do venture capitalists affect investment performance? Evidence from first-time funds". I thank seminar participants at Carnegie Mellon, Duke, the first RICAFE2 conference at the London School of Economics, the 2007 American Finance Association Meetings and the 2007 Western Finance Association Meetings for their comments and Sridhar Arcot, Rudiger Fahlenbrach, Simon Gervais, David Hsu, Laura Lindsey, Manju Puri, David Robinson, Catherine Schrand. Dean Shepherd (the associate editor) and two anonymous referees for their suggestions. I thank Joseba Celaya, Adrian Cighi and Ling Luo for research assistance. All errors are mine.

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[1] See, for example, Cochrane (2005), Kaplan and Schoar (2005), Phalippou and Gottschalg (2006) and Hwang, Quigley and Woodward (2005).

0883-9026/$ – see front matter
doi:10.1016/j.jbusvent.2008.05.008

I find that the strongest predictors of first-time venture capital fund performance are what I term task-specific and industry-specific measures of human capital rather than general measures of human capital. In particular, first-time funds whose management teams possess more prior venture capital investing experience and more prior experience managing start-up companies exhibit greater fractions of portfolio company exits. I also find that funds whose management teams possess more prior work experience in management and strategy consulting, non-venture finance and professional science and engineering experience greater fractions of portfolio company exits. I find that having more general human capital within a venture capital fund management team, as measured by managers' education in particular areas such as business, law and science and engineering, does not robustly predict better performance. However, I do find, perhaps counter-intuitively, that management teams with more general human capital in business obtained through MBAs perform on average worse than other fund management teams. A possible explanation for this result is that there is an oversupply of individuals of possessing MBAs relative to those with other educational backgrounds who are typically candidates to enter the venture capital industry. Finally, I show that the human capital measures that predict the performance of venture capital funds also predict whether the management team is able to raise a follow-on fund.

The findings support the idea that differences in venture capitalist human capital partially explain the documented heterogeneity and persistence in venture capital fund performance (e.g., Kaplan and Schoar (2005)). The findings also suggest which measures of human capital matter and point us towards future research that can shed further light on how venture capitalists with different types of human capital affect the outcomes of the investments they make.

2. Introduction

A central question in the financial economics literature is whether there are differences in the abilities of investment managers exhibit superior investment performance (e.g., Fama, 1970). A central question in the management and strategy literature is how top management teams affect a firm's decisions and subsequent performance (e.g., Hambrick and Mason, 1984). Fundamentally related to both of these literatures is the labor and organizational economics literature on human capital (e.g., Becker, 1964).

While there is a large empirical management literature that investigates the role of human capital on organizational outcomes (e.g., Beckman and O'Reilly, 2007; Bertrand and Schoar, 2003; Gimeno, et al., 1997; Pennings et al., 1998; Wiersema and Bantel, 1992), there is comparatively little research in financial economics on the role that human capital plays in explaining differences in investment performance, despite a fairly large empirical literature which looks for predictability in investment performance more generally (e.g. Brown and Goetzmann, 1995; Elton, et al., 1993; Jensen 1968).[2] This is surprising since making and managing investments is a research- and information-based activity which requires a large amount of human effort. A natural place to look for evidence that differences in investor human capital, or skill, predict investment performance is professionally managed investment vehicles, such as mutual funds, hedge funds and venture capital and private equity funds. The researcher can often observe the identities of the managers of these investment vehicles as well as measures of investment performance of these variables.

This paper investigates the role the human capital of venture capital fund management teams plays in predicting the performance of venture capital funds. The paper's contributions are fourfold. First, I contribute to the financial economics literature on investment performance predictability. Additionally, because I focus on fund-level performance I am able to examine whether human capital measures which predict the performance of first-time funds also predict whether a follow-on fund is raised, enabling one test of whether human capital differences can explain persistence in venture capital fund performance documented in previous work.

Second, I am able to test several new hypotheses about how the human capital of top management teams affects firm performance. In particular, I test new hypotheses about how two types of specific human capital, which I call task-specific and industry-specific human capital, are related to first-time venture capital fund performance. The hypotheses I test are related to those tested in a recent study by Dimov and Shepherd (2005) which examines the influence of general and specific, broadly defined, human capital on the performance of venture capital firms. Because I collect a different set of manager biographical variables, I test a different, more nuanced, set of hypotheses about the roles of specific and general human capital types, such as task- and industry-specific human capital, in venture capital fund performance.

Third, my larger data sample allows me to control for a variety of other factors that may influence venture capital fund performance in order to more accurately assess the influence of management team human capital on fund performance. In so doing, I am able to test a number of previously tested secondary hypotheses about the impact of non-human capital measures on venture capital fund performance in a more recent sample of venture capital funds.

Finally, by focusing my analysis on first-time venture capital funds, I generate some novel statistics on the education and employment histories of venture capitalists who form first- time funds and how these venture capitalists join together in teams. Understanding who forms first-time funds and what determines which funds succeed is important not only for investors seeking to invest in such funds but also for understanding which types of venture capitalists may be needed to create a successful venture capital market in regions where such markets are nascent or nonexistent. The rest of the paper is structured as follows. Section 3 discusses the hypotheses to be tested and the theoretical literature motivating them. Section 4 introduces the data and describes the characteristics of venture capitalists raising first-time funds. Section 5 presents the empirical analysis and the main findings. Section 6 discusses the main findings and suggests future directions for research. Section 7 concludes.

[2] Two notable exceptions are empirical studies on the role investor human capital plays in predicting investment performance are Chevalier and Ellison (1999) and Golec (1996) in the setting of the mutual fund industry.