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Polishing diamonds in the rough: The sources of syndicated venture performance ☆

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ABSTRACT

Using an effort-sharing framework for VC syndicates, we assess how syndication impacts investment returns, chances of successful exit, and the time taken to exit. With data from 1980 to 2003, and applying apposite econometrics for endogeneity to these different performance measures, we are able to ascribe much of the better return to selection, with the value-addition by monitoring role significantly impacting the likelihood and time of exit. While the extant literature on Venture Capital (VC) syndication is divided about the relative importance of the "selection" and "value-add" hypotheses, we find that their roles are complementary.

1. Introduction

Venture capitalists invested $28.3 billion in 3808 deals in 2008,[1] many of these through syndications accounting for two-thirds of all VC investment rounds, making it a significant phenomenon in this industry. Syndicated venture investment in privately held firms is hypothesized to lead to superior venture selection (Wilson, 1968; Sah and Stiglitz, 1986; Lerner, 1994; Sorenson and Stuart, 2001), to mitigate information asymmetries between the initial venture investor and other later-round potential investors (Admati and Pfleiderer, 1994; Lerner, 1994), to add value by monitoring the performance of portfolio companies (Brander et al. (2002) who test both selection and value-add, finding in favor of the latter), and to amplify the value-addition of venture capitalists (Hellmann and Puri, 2002;

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[1] See http://www.pwcmoneytree.com.

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Kaplan and Stromberg, 2004; Lindsey, 2008; Hochberg, 2008). While research examining the performance of venture capital-backed firms is abundant, we do not have a complete understanding of the rationale behind VC syndication. Although theories in finance suggest that selection and value-add by monitoring should be different if capital is provided by a syndicate instead of a single VC, there has been limited scrutiny of the multivalent impact of syndication on venture firms' exit performance.

The decision to syndicate by the lead VC and entrepreneur depends on the trade-off between the likely benefits of syndication (coming from selecting better ventures or adding value to the firm) versus relinquishing some value to new syndicate members.[2] We conduct a large-scale study of the determinants of syndication and its impact on exit performance, using 98,068 financing rounds of venture firms in the Thomson Financial's Venture Economics (VentureXpert) database from 1980 to 2003. Rather than only examine returns, we focus on three different dimensions of exit performance (i.e., exit probabilities, time-to-exit, and exit multiples) and thereby reframe the debate as to whether a syndicate selects promising companies and/or adds value to portfolio firms. Employing an analytical framework of effort-sharing under which a syndicate's effort is allocated to ex-ante venture selection and post-selection value-addition activity, and controlling for endogenous treatment effects with apposite econometrics, we are able to determine the relative importance of the selection and value-addition roles in VC syndications for each of the three dimensions of venture performance.

Consider a VC syndicated project where any synergy arising from syndication is attributable to selection and/or monitoring effort. Usually, the project is sourced by a lone VC, who conducts the initial due diligence to ensure that the project has potential. This VC then approaches the syndicate to consider the project. An initial effort $e \in (0,1)$ is expended by the syndicate on project selection. Assume there are two types of projects, high quality (H), and low quality (L). The exit multiple obtained from each, respectively, will be denoted $\{Y_H, Y_L\}$. Define the relative ratio of multiples to be $\eta = Y_H/Y_L$. The more effort expended on selection increases the chances that the project chosen will be of high quality. Assuming that the efficacy of project choice is linear in effort, the expected multiple of the chosen project will be $eY_H + (1-e)Y_L$.

Total effort is normalized to unity. Therefore, post-selection effort $(1-e)$ is put into subsequent monitoring by the syndicate to add value to the project. The probability of exit per period then depends on monitoring effort. We define this probability to be $p = (1-e)$.[3]

The expected multiple on the project is the probability of exit times the expected multiple conditional on exit:

$$E(Y) = (1-e)[eY_H + (1-e)Y_L].$$

Taking the derivative of this expression with respect to e, we get the first-order condition:

$$\frac{dE(Y)}{de} = Y_H - 2eY_H - 2(1-e)Y_L = 0$$

and solving for e results in optimal selection effort

$$e^* = \frac{Y_H - 2Y_L}{2Y_H - 2Y_L} = \frac{\eta/2 - 1}{\eta - 1}.$$

The following comparative statics follow immediately:

$$\eta \uparrow \infty \Rightarrow e^* \uparrow 1, \quad \eta \downarrow 2 \Rightarrow e^* \downarrow 0.$$

When $\eta = Y_H/Y_L$ increases, the model predicts that more effort of the syndicate will be directed to project selection. That is, as high quality projects become relatively superior to low quality ones (i.e., as η increases), the syndicate naturally finds that it is worth expending more effort on project

[2] In addition to selection and value-add, Lerner (1994) suggests that expected future reciprocity is also a motive for syndication, and this is empirically confirmed in Hochberg et al. (2007). See also evidence in Hochberg et al. (2010) suggesting that syndication may be used as a barrier to entry where networks of VCs aim to control market share.

[3] In this simple model, we do not assume that good selection feeds into a higher probability of exit, only into a greater multiple on exit. Other specifications of the probability of exit are feasible, such a $p = (1-e)(1+e)$, where the second term reflects the benefits to selection on exit probability. Note that with this modification, as effort e on selection increases, the probability of exit does decline, but in a slower (concave) manner, versus a fast (linear) drop as in the simpler case. Qualitatively, the results do not change.