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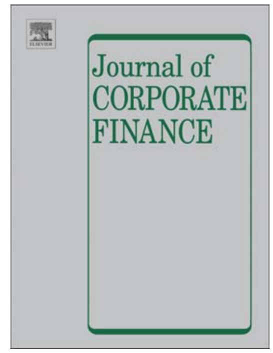

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Venture Capital and the Investment Curve of Young High-Tech Companies☆

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Abstract

We explore how and when venture capital (VC) alleviates the financial constraints of portfolio companies. Using a sample comprising 128 VC-backed companies and 233 non-VC-backed companies identified by propensity score matching, we estimate an error-correction model by accounting for the fact that the investment curve may be U shaped because of capital market imperfections. Our findings show that VC leads the investment curve to flatten in portfolio companies, which indicates an alleviation of financial constraints. This effect, however, is economically and statistically significant only after companies receive a follow-on round of VC financing. Because follow-on rounds, on average, do not involve larger amounts invested but have stronger informative content than initial rounds of investment, we interpret this result to indicate the importance of VC certification for the alleviation of financial constraints in portfolio companies. Evidence regarding the access to credit by VC-backed companies confirms this interpretation of the results.

Keywords: Venture Capital, Investment Curve, Young High-Tech Companies, Financial Constraints, Staging, Certification.
JEL: G32, D92, G24.

1. Introduction

In this study, we explore how and when venture capital (VC) alleviates the financial constraints of young high-tech portfolio companies. These companies typically have a limited availability of internally generated cash flow and are also severely exposed to frictions in capital markets that inhibit the access to other forms of external financing (Berger and Udell, 1998). Accordingly, young high-tech companies are exposed to financial constraints that restrain their growth and investment (Carpenter and Petersen, 2002a,b).

Several works in the literature have studied whether VC alleviates the financial constraints of portfolio companies. Overall, the empirical evidence indicates that VC reduces young high-tech companies' financial constraints (Bertoni et al., 2010, 2013, Engel and Stiebale, 2014). However, the literature is silent about how and when these financial constraints are eased. Accordingly, we aim to shed light on these issues.

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