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Trademarks and venture capital valuation

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ABSTRACT

This study investigates the role of trademarks in the start-up valuations of venture capitalists (VCs). Our results show that the number and breadth of trademark applications have inverted U-shaped relationships with the financial valuations of start-ups by VCs. The findings also indicate that in later funding rounds, the value of trademark applications decreases when the start-up progresses into more advanced development stages. Start-ups should consider these findings when seeking funding from VCs and should stress their market and growth orientations and their willingness to protect their marketing investments by highlighting their trademark activities.

1. Introduction

Venture capitalists (VCs) face challenges when observing the quality of start-ups as investment targets. These challenges result from the considerable information asymmetries that exist between VCs and start-ups (Kollmann and Kuckertz, 2010; Leland and Pyle, 1977). Start-ups are new to the marketplace and do not have an observable track record (Hannan and Freeman, 1984; Morse et al., 2007; Shepherd et al., 2000) that the VCs can use as a criterion to make their investment decisions (Macmillan et al., 1985; Muzyka et al., 1996). To overcome these information asymmetries, VCs evaluate, among other factors, the intellectual property (IP) assets of start-ups. However, previous research regarding the role of IP assets in VC financing has primarily focused on patents (Audretsch et al., 2012; Baum and Silverman, 2004; Cao and Hsu, 2011; Engel and Keilbach, 2007; Haeussler et al., 2009; Hsu and Ziedonis, 2008; Lerner, 1994; Mann and Sager, 2007). Although patents are an important criterion to consider when investing in start-ups (especially technology start-ups), the literature suggests that other IP assets, such as trademarks, might also have considerable effects on firms' market values (Greenhalgh and Rogers, 2006a,b; Sandner and Block, 2011). It is therefore important to include both patents and trademarks when studying VC financing, as both forms of IP cover different aspects of the start-up's business model: patents are associated with technological aspects, whereas trademarks refer to market aspects. Trademarks grant their holders the right to exclude others from the use of protected words, signs, or symbols (Besen and Raskind, 1991; Landes and Posner, 1987). Thus,

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trademarks serve as a means of protecting firms' brands and marketing assets (Barth et al., 1998; Mendonça et al., 2004; Sandner and Block, 2011; Wood, 2000). Although this exclusion right might not produce immediate value for a start-up, the filing of trademarks nevertheless constitutes important information for VCs because it demonstrates a start-up's degree of market and growth orientation and its willingness to protect its current and future marketing efforts from the impairment of others (Sandner and Block, 2011).

Studying the role of trademarks in VC financing decisions is therefore also a highly relevant issue in entrepreneurial marketing research. Prior research suggests that marketing investments are highly relevant for the success of young entrepreneurial ventures (Gruber, 2004; Hills, 1984; Kraus et al., 2011). Findings on VC financing decisions support this claim by indicating that VCs consider a start-up's market orientation to be an important investment criterion (Douglas and Shepherd, 2002; Hills, 1984; Hisrich, 1989; Wortman et al., 1989). Nevertheless, few empirical studies have examined the actual impact of entrepreneurial marketing actions on VC financing decisions (Gruber, 2004; Kraus et al., 2011). Empirical evidence on the strength of this effect and its boundary conditions is relevant from both a theoretical and a practical perspective and would help start-ups optimize their use of resources toward maximizing their VC valuation.

This study seeks to analyze the role of trademarks in VCs' valuations of start-ups. More specifically, we investigate whether the number and breadth of a start-up's trademark applications influence a VC's financial valuation of the start-up. We also investigate the effect of trademark applications in later funding rounds when the start-up progresses into more advanced development stages. Using a large US firm-level transaction dataset from 1998 to 2007, we show that the number and breadth of trademark applications have inverted U-shaped relationships with VCs' financial valuations of start-ups. Our regressions also indicate that in later funding rounds, the positive effect of new trademark applications decreases when the start-up progresses into a more advanced development stage.

With these findings, we contribute to entrepreneurship and venture capital research in several ways. Our study contributes to the growing literature on VCs' financial valuations of start-ups (Dittmann et al., 2004; Manigart et al., 2000; Miloud et al., 2012). VCs appear to regard trademarks as an (input-based) indicator of the start-up's future sales. A start-up's trademark filings can also be interpreted as a signal of the start-up's market orientation, growth ambition, and willingness to protect its marketing assets. In addition to their signaling value, trademarks have protection value, i.e., they protect a start-up's brands and marketing assets through the right to exclude others from the use of protected words, signs, or symbols. This exclusion right remains even when the start-up fails. Our study also contributes to the literature on entrepreneurial finance (e.g., Baum and Silverman, 2004; Janney and Folta, 2003; Leland and Pyle, 1977; Prasad et al., 2000. A number of studies have investigated the role of a start-up's patents (Audretsch et al., 2012; Baum and Silverman, 2004; Cao and Hsu, 2011; Engel and Keilbach, 2007; Haeussler et al., 2009; Hoenig and Henkel, 2012; Hsu and Ziedonis, 2008; Lerner, 1994; Mann and Sager, 2007) and alliances (Baum and Silverman, 2004) in securing VC financing. Our results show that VCs also value marketing-oriented IP rights, such as trademarks. Finally, our study contributes to the entrepreneurial marketing literature (Boag, 1987; Carson, 1985; Gruber, 2004; Hills and LaForge, 1992; Hills et al., 2008; Kraus et al., 2011) by both quantifying the repeatedly proposed effect of the market and growth orientations of start-ups and their willingness to protect their marketing assets on VC valuation and showing that trademarks are valid signals of this orientation. We also contribute to research on the marketing–finance interface, which had predominantly focused on established and publicly traded firms and linked these metrics to changes in stock returns (for an overview, see, e.g., Srinivasan and Hanssens, 2009) by showing that marketing investments are also crucial for VCs' valuation of start-ups.

The remainder of this study is organized as follows: Section 2 reviews the related literature. Section 3 develops hypotheses regarding the effect of trademarks on VC valuation. Section 4 presents our data. Section 5 provides the descriptive and multivariate results, which are then discussed in Section 6. Section 7 discusses the limitations of this study and suggests avenues for further research. Section 8 presents the conclusions.

2. Related literature

2.1. VC investment process and VCs' financial valuation of start-ups

The VC investment process can be divided into the deal, origination, screening, evaluation, and structuring phases (Kollmann and Kuckertz, 2010; Petty and Gruber, 2011). The evaluation criteria of VCs and their importance change throughout the investment process (Petty and Gruber, 2011) and include the personality and experience of the entrepreneur, product and business model characteristics, and market and financial characteristics (Franke et al., 2006; Ge et al., 2005; Macmillan et al., 1985; Zacharakis and Meyer, 2000). These evaluation criteria, however, are often characterized by high levels of uncertainty. Start-ups are new to the marketplace and do not have an observable track record (Hannan and Freeman, 1984) that VCs can use in the investment process. Information asymmetries exist that often hinder the establishment of a VC–start-up relationship (Kollmann and Kuckertz, 2010; Leland and Pyle, 1977). Kollmann and Kuckertz (2010) show that evaluation uncertainties with respect to certain evaluation criteria vary throughout the investment process. For example, in the early phases of the investment process, criteria related to the start-up's management are uncertain, whereas in later phases of the investment process, evaluation criteria such as market acceptance and profitability are associated with uncertainty with respect to the financial valuation of start-ups. This later phase of the investment process is less concerned with the evaluation of the management team and the feasibility of the business concept and more concerned with the ability of the start-up to transform the business concept into sales and profits, which are important for the VC's financial valuation of the start-up (Kollmann and Kuckertz, 2010). VCs are interested in financial returns, which can be achieved in several ways, e.g., engaging in product market competition, licensing, or collaborating with established firms through alliances or acquisitions (Baum and Silverman, 2004; Gans et al., 2002). Previous studies show that in the process of establishing financial value for start-ups, VCs use evaluation criteria such as the start-up's