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ABSTRACT

During the last four decades, the venture capital (VC) industry has become an economically dominant force in the U.S. economy. Over 1,300 companies that were founded during this period are currently listed on major U.S. stock exchanges. Of these, 40% were VC-backed and were responsible for 85% of the total R&D spending in 2014. Given the economic importance of VCs, a vast amount of academic research has studied the VC industry. A particular area of interest in this research has been the factors that predict which new ventures will receive VC funding. Research prior to 2007 had identified several factors such as the personality and characteristics of the founder, the product, the market and the financial considerations as important in VC funding decisions. Since 2007, researchers have been successful in identifying certain new criteria that predict VC funding decisions and have also uncovered certain nuances in the effects of the criteria previously identified. This paper reviews this new research on VC funding decisions.

Keywords: venture capital, new venture, startup, funding criteria

JEL Classification: G24, M13, L26, D81

G24: Investment Banking • Venture Capital • Brokerage • Ratings and Ratings Agencies
M13: New Firms • Startups
L26: Entrepreneurship
D81: Criteria for Decision-Making under Risk and Uncertainty

INTRODUCTION

Venture capital (VC) is used to fund high growth ventures that are highly innovative but typically at early stages of development, and therefore involve considerable risk. While some of these new ventures may already have fully developed products or technologies, many are still at the idea stage when they first receive VC funding.

Since the relaxation of the Prudent Man Rule in 1979, which allowed pension funds to invest in VC funds the U.S. VC industry has grown into a dominant force in the economy (Gompers & Lerner, 2001). Between 1985 and 2008, over 34,000 U.S. firms received VC funding. According to a recent study by Gornall & Strebulaev (2015), of the over 1,300 companies founded after 1974 that were listed on a major U.S. stock exchange in 2014, over 40% were VC-backed. Together, these VC-backed companies account for 63% of the market capitalization, 38% of the employees and a staggering 85% of the total R&D spending by all post-1974 companies. Not surprisingly, studies have found that VC funding has a positive association with firm growth, technological development, and the evolution of industries (Audretsch & Thurik, 2001; Bottazzi & Da Rin, 2002; Florida & Kenney, 1988; Keuschnigg, 2004; Kortrum & Lerner, 2000; Timmons & Bygrave, 1986).

During the past three decades, a considerable amount of academic research has explored various aspect of the VC industry. One key aspect that has received a lot of scholarly attention is VC firms' investment behavior, especially the criteria that determine which new ventures will receive VC funding. These criteria can be broadly divided into two categories: factors related to the new ventures seeking funding and factors related to the VC firms themselves. With respect to new venture-related factors that predict VC funding, research has found that VCs consider the idea, the market, the personality and experience of the founder and the management team, and financial considerations, that is, the cash out potential of the proposed new venture (Hall & Hofer, 1993;

MacMillan et al., 1987; Tyebjee & Bruno, 1984). As for VC firm-related factors, research suggests that VC firm partners' background and experience (Franke et al., 2006; Shepherd et al., 2003), their risk perceptions (Fiet, 1995; MacMillan & Narasimhan, 1987) and the VC firms' position in the syndication network (Podolny, 2001; Sorenson & Stuart, 2001) are associated with VC funding decisions.

Despite the vast amount of research on the predictors of VC funding however, our understanding of VC investment behavior is still limited and there is no widespread consensus on the relative importance of the criteria identified. Some studies suggest that the founder and the management team are the most important criteria in VC decision making (Muzyka, Birley, & Leleux, 1996) while others have suggested that the most critical criteria are the product and the potential market (Tyebjee & Bruno, 1984; Gompers & Lerner, 2001). Consequently, research interest in further exploring factors that influence VC funding decisions has continued in the recent past.

The purpose of this paper is to review recent research on VC investment behavior. The papers included in this review were published in the premier management journals between 2007 and 2015 and had the phrase "venture capital" in either the title or the abstract. The journals we included are ***Academy of Management Journal***, ***Academy of Management Review***, ***Administrative Science Quarterly***, ***Journal of Business Venturing***, ***Journal of Management***, ***Management Science***, ***Organization Science***, and ***Strategic Management Journal***. A list of the papers included in this review is provided in the Appendix.

Broadly speaking, the papers we review examine how the likelihood of a new venture obtaining VC funding is affected by factors such as the demographic composition of the founding team, the geographical, cultural and social proximity between the VC and the entrepreneur, the amount of media attention received by the new venture, the communicative and ceremonial aspects

of the information submitted by the entrepreneurs to the VC, the relative impact of entrepreneurial passion and preparedness, the category affiliations/labels adopted by the new ventures, and the level of uncertainty with respect to the new venture. In addition, these studies also examine how VC investment behavior is affected by the VC firms' own decision biases and risk perceptions, which are in turn affected by characteristics of their TMTs as well as the firm's reputation.

NEW VENTURE CHARACTERISTICS AS PREDICTORS OF VC FUNDING

A majority of the papers published recently have further explored the effect of new venture-related characteristics on VC funding decisions. This research has identified certain additional characteristics of new ventures, such as the demographic composition of the founding team, the entrepreneur's passion and preparedness, and the information presented by the entrepreneur, that make it more likely that they will receive VC funding. In addition, some papers have also uncovered more nuanced effects of the factors already known to affect VC funding decisions.

Founding Team Characteristics

It is well established that founding team characteristics impact organizational outcomes (Kimberly, 1979; Boeker, 1988; Eisenhardt & Schoonhoven, 1990; Baron et al., 1996). Further, the importance VCs place on the strengths and weaknesses of the founding team when making funding decisions is also recognized (Goslin & Barge, 1986; Baum & Silverman, 2004). In an attempt to better understand how different aspects of the founding team might affect these decisions, Beckman, Burton & O'Reilly (2007) look at certain characteristics of new ventures' founding teams and early TMTs. They find that early TMTs with diverse functional backgrounds and diverse prior employment affiliations are more likely to achieve important milestones, including obtaining VC funding. However, while they do not hypothesize it, they also find that overall, the human capital of founding team/early TMT members, that is, their prior executive and startup experience, is a

stronger predictor of VC funding than functional or background affiliation diversity. Interestingly however, they find that the effects of the two types of human capital variables are not the same; while prior executive experience is positively associated with the likelihood of receiving funding, prior entrepreneurial experience was found to actually reduce this likelihood.

Prior research on TMT demographic characteristics (Hambrick & Mason, 1984; Finkelstein & Hambrick, 1990) has established that the collective knowledge and insight of the TMT is associated with firm success (Hitt, Bierman, Shimizu, & Kochhar, 2001). In general, research on demography examines the team's average characteristics as well as the differences between members and attempts to explain the positive as well as negative effects of team heterogeneity. Among the negative effects of team heterogeneity are lack of trust, greater conflict and disruption of group processes while the positive effects include access to a greater range of resources, skills, experiences, as well as social ties (Reagans et al., 2004; see Williams & O'Reilly, 1998 and Hoang & Antoncic, 2003 for reviews).

Entrepreneurship research has traditionally focused on characteristics of individual entrepreneurs rather than entrepreneurial teams (e.g. Kisfalvi, 2002). However, there is an increasing recognition that new ventures are frequently founded by entrepreneurial teams and not individual entrepreneurs (e.g. Cooper et al., 1994; Chowdhury, 2005). Accordingly, a stream of literature has begun to study team processes and effectiveness in entrepreneurial ventures (Ensley et al., 2002; Higashide & Birley, 2002). This research has focused mostly on human capital arguments (Aldrich & Zimmer, 1986; Eisenhardt & Schoonhoven, 1990; Cooper et al., 1994; Gimeno et al., 1997; Baum & Silverman, 2004; Chowdhury, 2005). The limited amount of prior research on entrepreneurial demographics has largely theorized about the negative consequences of group diversity such as interpersonal conflicts, disruption of group process and lack of trust, although these hypotheses have often not been supported (Ensley et al., 2002; Watson et al., 2003; Chowdhury, 2005; Chandler

et al., 2005). On the other hand, the positive effects of diversity, especially its informational benefits, have not received much attention even though access to information is known to be one of the key factors in new venture success (Birley, Aldrich, & Zimmer, 1986).

In their paper, Beckman et al. (2007) focus on demographic diversity, arguing that the benefits of diversity will likely outweigh costs in entrepreneurial settings because founding and early TMT members participate on a voluntary basis. They further argue that functional diversity in the founding team and early TMT of new ventures, which provides access to a broader range of skills/abilities to manage the organization (e.g. Keck, 1997; Randel & Jaussi, 2003), will make the firm more attractive to external stakeholders, including VCs, by signaling that the management has the requisite skills and capabilities to make the firm successful. In addition to functional diversity, the authors propose a new measure, that is, diversity of background affiliation which refers to the degree to which the founding/early team members have common prior employers. They consider two aspects of background affiliation – affiliation diversity and overlap. They argue that diversity in prior affiliations provides access to different networks which in turn helps the new ventures get access to VC (Burton et al., 2002; Higgins & Gulati, 2003). On the other hand, teams with overlapping prior affiliations tend to be cohesive, that is, they have great social capital (Coleman, 1988). This greater social capital improves new venture performance (Ensley et al., 2002) because team members have more effective communication and common frames of reference, as well as greater trust (Eisenhardt & Schoonhoven, 1990; Roure & Maidique, 1986). The authors hypothesize that both diversity and overlap will be positively associated with the likelihood of obtaining VC funding. However, their findings do not support their hypotheses.

In contrast to Beckman et al. (2007), a study by Petty & Gruber (2011) concludes that the quality of the management team is not a very important criterion in VC decision making. In an attempt to overcome some of the limitations of prior research resulting from the exclusive use of

post hoc methods, these authors conducted a qualitative longitudinal study of actual decision making in one European VC firm over a period of 11 years. The study analyzed comprehensive archival data relating to 3,631 funding proposals evaluated by the VC firm (35 of which were funded) over those 11 years. The records available to the researchers contained information on what the VC firm actually did during the evaluation process in the form of emails, electronic and written memos in archived deal files, and entries in a deal flow database called the "action log" which was the means used by the firm to track the progress of each proposal received throughout the evaluation process.

The authors conjecture that the reason prior research has found the management team to be important while their study does not support that conclusion could be that prior research has tended to focused on factors related to deal acceptance while the authors' study also captures reasons for deal rejection. The authors' discussions with partners in the VC firm they studied support their conclusion that the management team is less important. These discussions suggest that VCs do not attach a lot of importance to the founding team because they believe that they can easily replace part or even all of the team if required.

Entrepreneurial Passion and Communicative and Ceremonial Information

Entrepreneurial passion and its effect on new venture outcomes has been the focus of a lot of prior research (e.g. Baum & Locke, 2004). Entrepreneurial passion has been shown to be associated with positive outcomes such as venture growth (Baum, Locke, & Smith, 2001), financial success (Baron & Markman, 2000; 2003), and VC funding (Elsbach & Kramer, 2003). Researchers have argued that the reason passion is associated with positive outcomes is that it makes entrepreneurs more persuasive and helps to increase their social capital by widening their social networks (Baron, 2008).

A study by Chen, Yao, & Kotha (2009) reports the results of two studies, one involving a laboratory experiment and the other involving a survey of invited judges (including professionals from VC firms, banks and financial companies) in a university's business plan competition over two consecutive years. In contrast to prior research, they find no evidence that the entrepreneur's passion is related to VC funding. They find that rather than passion, it is the entrepreneur's preparedness that is positively, albeit marginally, related to the VC funding decision. In addition, although they do not hypothesize it, they find that preparedness partially mediates the relationship between the quality of the entrepreneur's business plan and the VC's decision to provide funding to the new venture.

Drawing on research in social judgment and persuasion, Chen et al. (2009) view the process by which entrepreneurs convince VCs to give them funding as a "persuasion process" (Elsbach & Kramer, 2003; Zacharakis & Shepherd, 2001. They conceptualize entrepreneurial passion as having two distinct dimensions: the affective and the cognitive. Passion, which is the affective component, is expressed through non-verbal cues such as facial expressions, body movement, and tone of voice while preparedness, which is the cognitive dimension, refers to the verbal content and substance of the business plan presentation.

They hypothesize that both passion and preparedness would be positively associated with the likelihood of the VC providing funding to the entrepreneur. However, as mentioned above, their empirical analysis did not support their hypothesis about passion. Moreover, the effect of preparedness on VC funding decisions was also marginal. They suggest that an explanation for the counterintuitive finding that passion does not predict VC funding decisions may be that passion has a more nuanced effect on funding decisions that previously recognized. Specifically, they conjecture that entrepreneurs who are well prepared are viewed more positively by VCs than entrepreneurs who are passionate but unprepared. They claim that their counterintuitive findings are consistent

with Baron's (1989) argument that people are more successful at ingratiation when they come across as sincere, and sincerity is related to substance.

In another study, Kirsch, Goldfarb, & Gera (2009) examine whether the information contained in business planning documents predicts VC funding. The communication view suggests that in order to convey that the new venture is high quality, entrepreneurs will try to include signals that are costly (Spence, 1974) since such signals effectively communicate information. On the other hand, the ceremonial view suggests that information disclosed by the entrepreneur in planning documents demonstrates an understanding of the norms of the business which serve to legitimize the entrepreneur/new venture from the VC's perspective. According to this view, cues suggesting mimetic conformance to prevailing norms (DiMaggio & Powell, 1983) may have low validity, i.e. little association with the true quality of the new venture. However, when the environment is highly uncertain, participants may nevertheless rely on such cues because of the difficulty of identifying high validity cues.

The authors studied a number of information cues that have been shown to be associated with success in new ventures and whose information content is readily verifiable. These included whether standard documents, like a business plan and an executive summary, were submitted by the entrepreneur, and whether those documents conformed to norms regarding information content. They also studied the presence and quality of specific information such as whether the new venture had previously received VC funding and if so, the amount of such funding; whether the document specifically articulated the funding request and the amount sought; and whether it discussed the number of team members and their human capital including education levels and prior entrepreneurial/business experience.

The authors find evidence consistent with the ceremonial view. More specifically, they find that the information contained in planning documents does not predict VC funding. Rather, the cues contained in those documents serve only a limited ceremonial role in funding decisions. Interestingly, they also find that while VCs do use some of the information generally contained in planning documents, they actually obtain that information from sources other than those documents. The authors conclude that ceremonial aspects of exchange may be important in contexts such as VC funding decisions when there is little basis to evaluate consequences of a decision within reasonable amount of time.

Media Attention to New Venture

In general, entrepreneurs make considerable efforts to attract media attention, particularly when they introduce new products that are not within established categories, with the objective of influencing stakeholders such as current and potential customers and ultimately obtaining legitimacy and access to resources. These efforts may include symbolic strategies involving communication (Lounsbury & Glynn, 2001; Martens et al., 2007) such as narratives (Porac et al., 2002; Martens et al., 2007) and press releases (Rindova et al., 2007) providing information about their vision (Santos & Eisenhardt, 2009), growth strategies (Porac et al., 2002), and market aspirations (Martens et al., 2007). These activities are known as sensegiving activities and influence the amount of media attention received by the new venture.

Information provided as part of a new venture's sensegiving activities can vary in terms of its amount and richness. The amount of information is related to sensegiving intensity i.e. the frequency of engaging in sensegiving, which results in the availability of more information which increases the new organization's salience and thus the extent to which it is noticed by the audience (Bonardi & Keim, 2005). On the other hand, information richness, which refers to its ability to

change the receiver's understanding by clarifying ambiguous issues (Daft & Lengel, 1986), is related to sensegiving diversity, that is the extent to which the organization uses different types of communication based on their effectiveness at conveying specific types of information. Thus, for example, a new organization may use press releases to provide information about its accomplishments (Rindova et al., 2007) and use stories to deliver information about its intended market positioning, strategies, etc. (Martens et al., 2007; Porac et al., 2002).

In their paper, Petkova, Rindova, & Gupta (2013) examine how VC firms' resource allocation decisions are associated with the media attention received by new ventures seeking funding. The authors argue that industry media tends to be influenced by the intensity of a new venture's sensegiving activities. The high frequency of information enables industry journalists to keep up with new developments in the field so that they can report periodically on startups/ products they identify as promising, thereby maintaining their credibility. On the other hand, journalists in the general media are more likely to be affected by the diversity of the new venture's sensegiving activities. General media reports focus on a broader range of topics and attempt to create "major news", i.e. stories that are picked up by other news media. This requires the availability of diverse information and therefore, journalists in the general media are likely to pay more attention to organizations about which diverse information is available (McLeod et al., 1991) while ignoring those about which more, but less diverse information is available.

The authors also argue that information makes a greater impact on the media if the source is credible (Ellis, 1992; Hovland & Weise, 1951). In turn, source credibility depends on the source's perceived competence/prior experience because experience assures that they understand the issues involved. In the context of new ventures, this would mean that the founder has an understanding of the startup process (Sapienza & Gupta, 1994), how to achieve milestones (Wasserman, 2003), and attract capable people (Beckman & Burton, 2008), which would help them formulate better

narratives about the organization (Lounsbury & Glynn, 2001). Moreover, they can draw upon their experience to provide comparisons to increase vividness/richness of information provided (Austin & Dong, 1994; Slater & Rowen, 1996).

The authors find that in addition to factors such as the quality of the idea and the risk profile of the market, while making funding decisions, VCs also take into account the degree of media attention received by the new venture in evaluating the startup's potential value. VCs give weight to public recognition received by the startup because startup success depends, in part, on its acceptance by key stakeholders. However, they find that VCs are affected only by industry specialized media attention and not by the attention received from the general media. They argue that industry media seeks to appeal to specialized audiences who have specific interests and expertise. These audiences include potential employees, customers, suppliers, and competitors, that is, the key stakeholders from the new venture's industry who can significantly affect its future path. Industry media attention received by a new venture can therefore indicate its high potential to these stakeholders. This finding challenges the conventional wisdom that being sophisticated, well informed investors with access to extensive information about the new ventures they are evaluating, VCs will not be influenced by the media attention they receive.

Finally, consistent with their arguments, the authors also find that industry media is, in turn, influenced by the intensity of the new venture's sensegiving activities and that the impact of these sensegiving activities is intensified by the degree to which the source of the information is considered credible due to prior entrepreneurial experience.

Categorization and Labelling

The literature on categories (Hsu, 2006; Hsu, Kocak, & Hannan, 2009; Rao, Monin, & Durand, 2005; Zuckerman, 1999) holds that people group similar things together in order to

simplify their understanding of the environment (Zerubavel, 1997). According to sociologists, categorization involves grouping like things together which helps to set boundaries and create shared understanding of what falls within those categories (Douglas, 1986; Zerubavel, 1993). Such classification may be defined formally by industry authorities or, in the absence of such an authority, develop informally. In addition, managers may affiliate their organizations with specific market labels in order to reflect their self-identity and the image they want to portray. Such affiliations form the basis of how external actors classify organizations, which in turn influences how the organizations are evaluated.

The general conclusion in this research is that firms that span multiple categories (product or market) or mix elements of multiple categories may not receive attention from relevant audiences, and may face poor evaluations, legitimacy challenges and even organizational failure. The reason such organizations are viewed less favorably is that the lack of clarity about where they fit within the field makes it difficult for the audience to understand them, which leads to a presumption of lower expertise (Phillips & Zuckerman, 2001; Rao, Monin, & Durand, 2005; Greenwood, Suddaby, & Hinings, 2002; Carroll & Swaminathan, 2000). This phenomenon is known as the categorical imperative (Zuckerman, 1999).

A recent stream of literature has begun to explore the impact of organizational categorization on new ventures' ability to obtain VC funding. This research finds that the effects of categorization are more nuanced than previously believed and that being associated with multiple categories is not always detrimental to new ventures. Two papers by Wry and colleagues consider the effects of category spanning by nanotube technology startups on the likelihood of VC funding. The authors argue that rather than the negative effect predicted by the categorical imperative, the positive or negative effect of category spanning will depend on which categories are spanned and the relationship between those categories (Rao et al., 2005; Ruef & Patterson, 2009) because while

audiences perceive categories as distinct, they can simultaneously also see how different categories relate to one another.

The authors use patent classes as the categories in these studies because patent classes group inventions based on their attributes and the consensus is that they represent meaningful distinctions among various areas of technological development. Patent classes are used in academic studies to assess the degree of relatedness between technologies (Katila, 2002; Rosenkopf & Nerkar, 2001) and by VCs to assess new venture focus during pre-investment property reviews (Bradley, 2007).

The first paper by Wry & Lounsbury (2013) finds that while the dispersion of a new venture's intellectual property (i.e. patents) across categories is punished by audiences, this effect is attenuated if the spanned categories are similar. More specifically, they find that the likelihood of obtaining VC funding (Fried & Hisrich, 1994; Martens, Jennings & Jennings, 2007) is lower for new ventures that hold patents in multiple categories (i.e. patent classes) (Zucker & Darby, 1997). However, this effect is moderated by the similarity between the specific categories spanned such that the negative effect of category spanning is weaker if the categories spanned are similar in that they (the patents) draw on the same body of knowledge or relate to only basic science or only applied products.

The authors of the second paper, Wry, Lounsbury, & Jennings (2014), find that whether hybridization, that is, mixing elements of multiple categories, has positive or negative effects on the new venture's ability to get VC funding depends on a number of factors. They distinguish between startups originating in science, that is, spinoffs from academic labs, and startups originating in technology that are set up by high technology entrepreneurs. They find that science-based new ventures benefit when they hybridize their core identity markers. However, technology-based startups are penalized when they do the same. On the other hand, technology-based startups are

rewarded when they hybridize peripheral identity features. The authors conclude that the effect of hybridization is not just a matter of degree but a matter of degree across multiple dimensions that affect audience perceptions differently.

The authors draw on insights from the cognitive psychology literature on composite concepts (Cohen & Murphy, 1984; Hampton, 1988), which suggests that how a composite is perceived depends on how the categories are combined. The authors argue that even though audiences perceive different categories as distinct, they simultaneously perceive the relationships between them. This is because audience understanding of mixed identities is based on an asymmetrical structure wherein one category (the header) anchors perceptions while the other category modifies it (Hampton, 1988; Murphy, 1988) and therefore, perceptions vary depending on the specific categories that are the header and the modifier and whether these categories are perceived as adding or reducing value. Due to their strong cue validity, prominent features of identity affect the header category (Rosch, 1975; Rosch & Lloyd, 1978). Thus, hybridizing central features of a firm's category of origin results in a new header being used to interpret the firm and its attributes while hybridizing peripheral features of the origin category are expected to affect perceptions in a different manner. This benefits startups originally from less valued categories (in the authors' context, science), if they hybridize into a more valued category (in their context, technology). In contrast, when startups originally from technology hybridize into science, they are seen as moving backward, and are therefore penalized by VCs.

Based on their findings, the authors conclude that in order to more fully understand the effects of category spanning by new ventures on their likelihood of obtaining VC funding, it is necessary to consider the various ways in which they can span categories and whether the hybridization affects their core or peripheral features because VCs' evaluations are affected by the extent to which the categories spanned are consistent with the VCs' view of how the categories fit

together. They also conclude that whether the effects of category spanning are positive or negative also depends on the new venture's category of origin.

The third study in this stream of literature is by Pontikes (2012) who argues that while unclear organizational identities may make organizations less appealing to "market-takers" who are simply looking to use or evaluate a product, they have the opposite effect on "market-makers" such as VCs, who seek to construct markets by developing new niches and changing the existing classification system. She argues that market-makers value the flexibility provided by an ambiguous identity because organizations with an ambiguous classification can potentially create products that change an industry or appeal to many different constituencies. Ambiguously classified organizations can also change to adapt to changing industry conditions without having to suffer the penalties that usually result from changing identity. At the same time, such organizations can lead the process of constructing a new label or shaping/defining an existing ambiguous label. She further argues that ambiguity regarding classification can arise not just because organizations claim multiple market labels but also because labels have differing strengths and affiliating with an ambiguous label can lead the organization to experience the effects of ambiguous classification.

Consistent with her argument, she finds that new ventures that are ambiguously classified because they are aligned with many unambiguous labels or because the labels themselves are ambiguous, are more attractive to VC firms. That is, they are more likely to receive VC funding. However, she notes that her results also suggest that spanning multiple ambiguous labels does not provide any additional benefits to the new venture. The author concludes that the audience's preference for or aversion to an organization's identity is associated with ambiguity in the labels.

Proximity of New Venture: Geographical, Cultural, and Social

Previous research on VC funding has suggested that geographical proximity between the VC and the entrepreneur contributes to success because it enables access to information and facilitates monitoring. In recent years, scholars have further explored the problems associated with geographical distance. In addition, the effects of cultural distance as well as social distance/proximity have also been studied as a determinant of VC funding. The main finding of this research is that distance of any kind makes it less likely that a startup will be funded by a VC. Further, two of the three studies find that if distant startups are funded, the investment will be in later-stage startups which are associated with lower risk.

In a study of cross-border investments, Dai, Jo, & Kassicieh (2012) find that VCs making cross-border investments are less likely to choose seed or early stage startups, or participate in the first round of funding received by a startup. Instead, they are more likely to invest in later stage ventures (which they refer to as "information transparent" firms) and in later rounds since by then there is usually more concrete information available. They argue that this is due to the greater levels of information friction and difficulty of monitoring resulting from the geographical and cultural distance, which significantly increase the level of uncertainty about the startup.

Two other studies in this stream of research have examined the effect of social proximity. Both these studies find that co-ethnicity between the VC and the entrepreneur increases the likelihood of an investment. Specifically, Bengtsson & Hsu (2015) argue, consistent with the phenomenon of homophily (McPherson et al., 2001), that VCs are more likely to provide funding to co-ethnic entrepreneurs because of a preference for interacting with co-ethnics since co-ethnicity gives rise to trusted relations. They argue that this is especially likely in a relational context such as venture capital where referrals are common. They further argue that an alternative to this

preference-based explanation may be enforced trust, which is a form of social capital (Coleman, 1988). Such enforced trust exists in the context of co-ethnics because they are likely to share social ties, which places them in a tight, closed network in which information about members' misconduct spreads quickly leading to sanctions, thereby controlling members' actions. However, the empirical analysis does not allow the authors to tease out which of these explanations actually holds.

The second study was carried out by Hegde & Tumlinson (2014) who argue that VCs select new ventures involving co-ethnic entrepreneurs for funding because co-ethnicity provides them better access to superior information about the entrepreneurs through their common social networks. This superior information facilitates the identification and selection of new ventures for funding.

Interestingly, both studies also find that when funding co-ethnic entrepreneurs, VCs tend to choose lower quality startups. However, again, they provide divergent arguments for this behavior. Hegde & Tumlinson (2014) argue that VCs lower their standards because they have greater confidence in their evaluation of co-ethnic entrepreneurs based on the availability of information relevant for selection through their social network and the fact that most potential candidates are unsuitable. This confidence is boosted further by the anticipation that they will be able to exert more influence on the entrepreneur post-investment. On the other hand, Bengtsson & Hsu (2015), taking a pessimistic view, argue that investment in lower quality ventures is a consequence of their overconfidence in their ability to evaluate and monitor co-ethnic entrepreneurs created by the availability of soft information through the network. Such overconfidence leads to insufficient due diligence and, ultimately, investment in inferior quality startups.

Both studies find the outcomes of the co-ethnic investments to be consistent with their argument. Specifically, Hegde & Tumlinson (2014) find that co-ethnic investments perform better while Bengtsson & Hsu (2015) find that such investments perform worse.

Country Political and Legal Conditions

As discussed above, VCs prefer to invest locally (Sorenson & Stuart, 2001), that is, in new ventures that are located close to them since this facilitates their ability to monitor the new venture and, by allowing frequent personal interactions, also strengthens their relationship with the founder. Nevertheless, because the recent institutional changes in favor of market-oriented policies in developing countries (Cuervo-Cazurra & Dau, 2009) enable VCs to better estimate the country risks and transaction costs associated with new ventures in the countries, some VC firms have started to make cross-border investments.

Research has begun to explore the effect of nonmarket factors such as political and legal conditions on VC investment strategies in developing countries. A paper by Khoury, Junkunc & Mingo (2015) finds that the quality of a country's political and legal institutions significantly affects the stage at which VCs invest as well as the amount invested per round.

The authors argue that weaker legal systems create additional transaction costs for VCs. VC investments become more risky in legal systems that lack meaningful penalties for misappropriation of investments and exhibit a significant discrepancy between the written law and its actual practice. They hypothesize that due to this, VCs investing in such countries will choose new ventures with lower uncertainty, such as, late-stage ventures. Moreover, they also predict that the amount the VCs invest per round in such firms will be lower.

They further argue that instability of the political environment in a country creates the risk of sudden changes in political policy that might have a detrimental effect on new ventures prospects, or

even survival. They predict that by increasing the degree of uncertainty faced by VCs making investments in new ventures, political uncertainty will also lead to VCs making smaller investments when they do invest. Finally, they argue that the weakness (quality) of legal and political systems in developing countries will weaken the expected/commonly observed patterns of VCs investing larger amounts as new ventures move through successive stages of development.

Their empirical analyses support their arguments for the most part. However, contrary to their hypothesis that the amount invested per round in startups in countries with weak legal systems will be lower, they find that VCs, in fact, tend to invest larger amounts in these ventures. The authors conjecture that these larger amounts are invested in order to account for the anticipated additional contracts-based transaction costs (Lerner & Schoar, 2005; Williamson, 1991) resulting from the weak legal environment.

New Venture Uncertainty

VC funding clearly involves a high level of risk/uncertainty. To understand how the uncertainty surrounding new ventures affects VC decisions not only to make investment but also to terminate investments, Li and colleagues, in a series of papers, have applied real options theory.

Real options create value by providing future decision rights, that is, by offering management the flexibility to act upon new information such that upside economic potential is retained while downside losses are contained (Trigeorgis, 1996). In the context of VC funding, investing in a prior round provide the investor an option to invest in current rounds and so on until successful exit or abandonment. At each round, the VC has a choice between investing and delaying investment or even terminating the investment. That is, it must decide whether to hold the current option or to invest now and obtain an option to invest again in the future.

The first two papers in this stream of research, which we reviewed, examine the investment versus delay decision. According to real options theory, delaying an investment until additional information becomes available is particularly valuable when the level of uncertainty is high and the investment is irreversible (Dixit & Pindyck, 1994; Kogut & Kulatilaka, 1994; McDonald & Seigel, 1986). Both of these conditions are satisfied in the context of VC investments. In addition to involving high levels of uncertainty, VC investments are at least partially irreversible because startups have mostly intangible assets with little or no tangible assets or financial wealth. Moreover, there is no secondary market to trade equity shares (Wright & Robbie, 1998).

Consistent with these arguments, the first paper by Li (2008) finds that VCs tend to delay investing in subsequent rounds when market uncertainty is high. However, he also finds certain factors, such as competitive pressures, have the opposite effect. Specifically, he finds that VCs tend to invest sooner in subsequent rounds in the presence of greater competition from other VC firms, higher levels of project-specific uncertainty and greater agency concerns. He argues that the presence of competitors prompts VCs to make investments sooner in an attempt to stay ahead since an investment by a competitor in another new venture with similar growth opportunities would result in the depreciation of the value the VC's option. On the other hand, project-level uncertainty and agency concerns will encourage VCs to invest sooner because in both cases, investment enables them to update available information.

The author concludes that, in addition to factors identified by prior research, such as portfolio company performance, syndicate characteristics, liquidity constraints, and agency concerns, real options value drivers, namely uncertainty and competitive pressure, have an important influence on staging decisions.

A paper by Li & Mahoney (2011), which we reviewed, examines the timing of the VC firm's first investment in a new venture. Consistent with the previous paper, they find that VCs tend to delay investments in highly volatile markets (i.e. where uncertainty is high), which provides them the flexibility to act upon new information in the future. However, they also find that this effect is weakened by two factors: growth potential of the market and the level of competition. When growth potential is high, deferral implies the potential loss of profit, and therefore, it weakens the effect of uncertainty on the likelihood of deferral. Similarly, when the level of competition is high, deferral creates the risk that a competitor will invest in the project before the focal VC can, eliminating the focal VC's option entirely. Alternatively, a competitor could invest in a startup with similar technology reducing the value of the focal startup, thereby reducing the value of the deferral option.

A third paper, which we reviewed in this stream of literature (Li & Chi, 2013) examines the effect of uncertainty on VCs' decisions to withdraw from an investment. The authors of this study show that uncertainty reduces the firm's propensity to withdraw from a funded venture prior to going public (or being acquired) because doing so allows the management to exploit the upside potential if industry conditions improve and minimize downside risk if conditions worsen (Kumar, 2005; Moel & Tufano, 2002).

This study also considers the moderating effects of portfolio focus and diversity on the impact of uncertainty on VCs' decisions to withdraw from investments. Portfolio focus, in this context, is defined as the dispersion of the firms' investments across projects within the same industry and reflects the level of redundancy added by each project to the firm's portfolio. Therefore, focus in an industry increases when the firm has many similar or related projects. Portfolio diversity is the dispersion of investments across different industries. Portfolio focus and diversity are distinct but not orthogonal dimensions of portfolio configuration – a firm can have high focus in each industry as well as high diversity across industries. Investing in multiple startups

simultaneously allows VCs to capitalize on the upside potential and contain downside losses. Some startups in their portfolio may be partially duplicative in functionality such that one's success reduces the value of the other. Moreover, returns from portfolio companies are unlikely to be perfectly correlated due to different factors driving returns. The authors argue that the extent of duplication and the degree of correlation in returns are the two mechanisms through which portfolio focus and diversity affect option values.

Consistent with their hypotheses, the authors find that the greater the VCs' portfolio focus, the weaker is the negative effect of uncertainty on their propensity to withdraw. In other words, the propensity to withdraw decreases as uncertainty increases. However, the decrease in this propensity to withdraw is lower for greater levels of portfolio focus. Portfolio diversity has the opposite effects, that is, the greater the portfolio diversity, the stronger the negative effect of uncertainty on the propensity to withdraw.

The authors' argument for the above finding is that unless portfolio companies have synergies, redundancy between them reduces their joint value in good times because the duplicative parts of two companies can't yield more than the value derived from the duplicated part of either, even if both are successful (Girotra et al., 2007). Moreover, portfolio companies in the same industry are subject to the same industry effects, that is, their returns are positively correlated making them poor hedges, reducing joint option value. This is true regardless of whether they are substitutes or complements. Redundancy reduces portfolio returns in good times and industry common shocks make investments less effective hedges against risk in bad times. Therefore, there is less need to keep both projects to take advantage of uncertainty when the firm has high portfolio focus – one is sufficient. Also, withdrawing from one project does not impair the firm's ability to hedge against downside risk. Thus, option value will increase less with an increase in uncertainty when portfolio focus is high, that is, portfolio focus will weaken the positive effect of uncertainty on withdrawal. In

contrast, portfolio diversity has the opposite effect because projects in different industries are likely to be affected by distinct factors and thus will be less correlated. Further, such projects are also likely to have a lower degree of redundancy.

VC FIRM CHARACTERISTICS AS PREDICTORS OF VC FUNDING

In addition to the new venture-related factors discussed thus far, VC investment behavior is also affected by characteristics of the VC firms themselves. Prior research has identified certain characteristics such as the VC firm partners' background and experience (Franke et al, 2006; Shepherd et al., 2003). In addition, the VC firms' position in the syndication network has also been shown to affect funding decisions (Podolny, 2001; Sorenson & Stuart, 2001). Recent research has continued to explore these and other VC firm-related factors that might determine which startups will be funded by VC firms. More specifically, studies have explored other aspects of the VC partners' background and experience and their effects on the partners' risk perception, characteristics of the firms' fund and portfolio, and characteristics that may increase their decision biases.

Fund and Portfolio Characteristics

The previously discussed longitudinal study by Petty & Gruber (2011) reveals that certain characteristics of the VC firm's fund and the portfolio, such as the composition of the current portfolio and whether the proposed venture competes with (or has synergies with) existing portfolio companies also affect the VC's decision to fund a new venture. The authors claim that portfolio composition as a decision criteria has not been studied in prior research, although it has been studied with respect to syndication and managing overall portfolio risk (Bygrave, 1987; Locket & Wright, 2001; Manigart et al., 2006). In fact, Petty & Gruber (2011) note that Tyebjee & Bruno

(1984) find that a prospective startups' fit with the current portfolio is not one of the criteria VCs seem to consider.

Further, the authors also find that sometimes VCs may pass on promising deals because of paucity of management time. Developing and managing their portfolio and increased deal-related activities place a constraint on VC firm resources, sometimes leaving little time for screening and evaluating new proposals or effectively monitoring new investments. For the same reason, promising deals that require extensive hands-on involvement may also be passed over by the VCs.

Their analysis suggests that that over time, VCs learn with experience in at least two ways. First, they become more efficient at recognizing problems with proposals. This enables them to deal more efficiently with proposals ultimately rejected. The time they gain from this efficiency is spent on more closely examining projects that are ultimately funded. An especially interesting finding of the Petty & Gruber (2011) study which also indicates the second way in which VC firms appear to learn from experience, is that the importance of various decision-making criteria changed over time, particularly between the VC firm's first and subsequent funds. Fund portfolio-related criteria, such as the startup not being appropriate for the fund and being at too early a stage for the fund, became more important for later funds than they were for earlier funds.

Risk Perception

A fair amount of work has been done on the strategies used by VC firms to manage their risk. Research has identified three main strategies for risk reduction used by VCs. These are syndication (Dimov & Milanov, 2010; Sorenson & Stuart, 2001), later stage investment (Dimov et al., 2007), and low levels of commitment to unfamiliar industries (Wadhwa & Basu, 2013). Syndication reduces risk by allowing sharing of information and knowledge with other VC firms (Bygrave, 1987; Matusik & Fitza, 2012). Investing in later stage startups also allows VC firms to

reduce their level of risk because such startups require less hands-on coaching (Gupta & Sapienza, 1992; Sapienza, 1992), and thus less specific technical expertise on the part of the VCs (DeClerq et al., 2006). In contrast, early stage ventures are riskier because they require considerable technical expertise (Dimov et al., 2007; Sapienza, Manigart, & Vermier, 1996). Finally, low levels of commitment to an unfamiliar industry, that is, low levels of resources, time, and effort (for mentoring and monitoring funded startups) committed by the VC to an industry (Gupta & Sapienza, 1992; Sapienza, 1992) relative to its activities across all other sectors reduce risk because they allow the VC to focus on the industries with which they are more familiar.

VC firm partners make a choice regarding the risk-return characteristics of the firm's portfolio of investments (Gupta & Sapienza, 1992). Thus, a VC firm's choice of portfolio strategy involves determining whether it will invest in early or late stage ventures, focus on one or a few industries or diversify across multiple industries, and whether it will invest locally or in a wider geographical area. Once chosen, this strategy guides the screening criteria used by the firm.

In studying VC decision making, scholars have generally treated VCs as a homogeneous group that make decisions in a uniform manner. In recent years however, there has been some effort to identify and explain variations in VC decision making such as the effect of the VC firm partners' experience. Some of the more recent research in this area has invoked the upper echelons theory (Hambrick & Mason, 1984). According to the upper echelons theory, managers' perceptions of their task environment are affected by their demographic characteristics which, in turn, affect their cognitive models and therefore determine how they gather, filter and interpret information. Thus, the managers' perceptions mediate the effect of their task environment on the firm's strategic choices. This perspective has been applied to the VC context in recent research which has found, as expected, that VC partners' expertise influences the VC firms' performance (Dimov & Shepherd, 2005).

In a study of investment allocation decisions of 108 U.S. VC firms over six years, Dimov, Shepherd, & Sutcliffe (2007) argue that in addition to the amount of expertise possessed by a firm's TMTs, the type of expertise possessed also has an impact on firm decisions. In making the argument, they cite recent research on TMT demography which has found that functional diversity in itself is insufficient to benefit the organization, but that the content of the diversity can be beneficial to the extent if fits with the firm's environment (Vogus & Sutcliffe, 2003). Dimov et al. (2007) find that TMT members who have financial expertise tend to prefer investments in later stage ventures, which are generally associated with lower levels of risk. They also find that VC firm status strengthens this negative association between the firm's level of financial expertise and its likelihood of investing in early stage ventures.

They argue that the TMT members' financial expertise, which enables them to evaluate the potential returns from a prospective investment and manage its financial resources, also determines their perceptions of the risks and returns associated with the investment. Their financial expertise also enables them to identify contexts in which reasonable assessments of risks and payoffs cannot be made. The authors argue that VC firms with greater financial expertise are likely to prefer investing in later-stage projects because such projects tend to have better defined product-market characteristics which facilitate the estimation and management of the associated returns and risks.

Dimov et al. (2007) also argue that high-status firms are likely to prefer investments in later stage startups because investing in unsuccessful new ventures is likely to damage their status (Washington & Zajac, 2005). Thus, in order to protect their status, high status firms will not exert the privileges afforded to them by their status in situations where their expertise is inconsistent with the needs of the startups. The authors make a similar argument regarding firm reputation, that is, that a firm's reputation is a valuable asset and therefore firms that have a good reputation will be motivated to protect it, and that one way to do so is to reduce the overall level of risk (Diamond,

1989). Accordingly, they predict that highly-reputed VC firms will be more likely to invest in later stage startups which are associated with lower levels of risk.

While their hypothesis regarding status is supported, they find that reputation has the opposite effect. They find that reputed firms with high levels of financial expertise tend to invest more in early stage startups. The authors conjecture that an explanation for this counterintuitive finding may be that highly reputed firms may invest in early stage ventures because they have accumulated slack resources due to their past good performance which was the source of their reputation and slack resources enable firms to engage in experimentation (Cyert & March, 1963).

In another paper in this stream of literature, Patzelt, ZuKnyphausen-Aufseb, & Fischer (2009) find that it is the TMT members' education and prior experience that determine their risk perceptions and therefore the firm's portfolio strategy. More specifically, they find that a greater proportion of TMT members with management education is associated with a diversification strategy. On the other hand, when a greater proportion of TMT members have a science/ technology background or prior entrepreneurship experience, the firms tend to invest in early stage ventures. Finally, they find that greater international experience in the TMT is associated with wider geographical scope of investments.

In their study, Patzelt et al. (2009) focus on the three types of risk that is most commonly studied in the VC industry: market, technical and agency risk. Market risk results from unforeseen market conditions and arises because new ventures generally target new markets about which there is limited information. Technical risk exists because new ventures often do not have fully developed technology so it is difficult to predict its likelihood of success. Finally, agency risk refers to the likelihood that the entrepreneur will behave opportunistically and not in the VC's interest (Eisenhardt, 1989).

The authors argue that due to cognitive limitations, individuals have a propensity to focus on aspects of the environment most familiar to them (Simon, 1947) and this propensity will lead VC firm partners to perceive each of these risks differently depending on their educational background and prior work experience. Therefore, TMT members with a technical background will focus mostly on technical risk, those with a management background will focus on market risk, while those with prior entrepreneurship experience will focus on both market and agency risk.

The authors argue that a higher proportion of individuals on TMTs with management education are associated with a diversification strategy because management education frequently focuses on finance theory including portfolio theory which holds that diversification lowers risk. Moreover, many of the other skills acquired through management education, such as, accounting, budgeting methods, and planning, are equally applicable across a wide range of industries.

They further argue that TMT members with science/engineering education are more likely to prefer investing in early stage startups because their education orients them towards innovation which predisposes them to focus more on the upside potential of the technology's success. Further, their education also provides them the skills to potentially assist the new ventures in their product/technology development efforts post-investment, making them confident that they will be able to help the startup succeed. They are also better able to estimate the time and financial and human capital required by the startup. Due to these factors, TMT members with science/engineering education tend to perceive the technical risk pertaining to early stage ventures as being manageable and controllable and prefer investing in such ventures.

They also argue that TMT members' prior entrepreneurial experience will promote investment in early stage ventures because due to their prior success, such individuals have high levels of entrepreneurial self-efficacy (Chen et al., 1998) and are likely to perceive entry into new

markets as a feasible task. These individuals will also believe that they have the necessary expertise to assist the new venture if required and ensure its success. Thus, they perceive the market risk associated with early stage ventures to be manageable. They go on to argue that entrepreneurial experience is also likely to lower their perception of agency risk because based on their experience, they believe they are better able to anticipate opportunistic behavior and therefore implement counter measures such as contracts or replacing the manager as necessary. Moreover, the authors draw on social identification theory to argue that TMT members' perceptions of low market and agency risks will be further enhanced by reinforcement of their entrepreneurial identity. According to social identity theory, individuals classify themselves and others into social categories (Tajfel & Tumner, 1985) which "reinforces the antecedents of identification" (Ashforth & Mael, 1989: 20-39). This may lead VCs with entrepreneurial experience to be generally sympathetic to entrepreneurs looking for funding. Advising entrepreneurs post-investment may also remind them of the pleasure of entrepreneurial tasks, leading to further reinforcement of their entrepreneurial identity and feelings of belongingness to the social category. Research suggests that when people anticipate positive feelings, they are optimistic and tend to deny information interfering with that (Baron, 2007). The authors argue that for all these reasons, VCs with prior entrepreneurial experience are likely to prefer investing in early stage ventures.

Finally, they also argue that firms with TMTs that have a higher proportion of members with prior international experience are more likely to have a broader geographical scope because, by virtue of their international experience, these individuals are likely to have knowledge of as well as social networks in other countries, which will lower their perception of the market and agency risks associated with new ventures based in other countries. Such individuals can also potentially rely upon these social networks for post-investment assistance to the startups. For example, they could

help the startup find appropriate alliance partners. Therefore, firms with such individuals are more likely to prefer broad geographical scope.

Petkova, Wadhwa, Yao, & Jain (2014) provide a different perspective on VC firms' risk perception. These authors find that a VC firm's likelihood of investing in an ambiguous (and therefore risky) sector is positively associated with the VC firm's reputation. At the same time, they also find that highly reputed firms are more likely to engage in risk management strategies including investing in later stage ventures, syndicating their investments and limiting their commitment to ambiguous sectors.

The authors argue that reputation, which refers to the firm's demonstrated ability to create value along key dimensions of performance, as perceived by stakeholders (Rindova et al, 2006; Rindova & Formbrun, 1999), exerts two opposing pressures on VC firms. One the one hand, as shown by studies of VC firm reputation, it creates an expectation that the firm will deliver a consistently high return on investment (Dimov et al., 2007; Lee, Pollock, & Jin, 2011). A firm's reputation also affects its subsequent ability to raise funds (Gompers, 1996; Lee & Wahal, 2004). On the other hand, studies also suggests that stakeholders develop especially high expectations from highly reputed firms such that delivering consistent performance may not adequately meet those expectations (Mishina et al., 2010; Wade et al., 2008). They argue that these raised expectation lead to higher aspiration levels, which, in turn, are likely to affect interpretations of threats and opportunities (March & Shapira, 1987). Consequently, reputed VC firms are likely to perceive risky investment opportunities, such as investment opportunities in an ambiguous sector, as worthwhile, ultimately making riskier investments.

Prior research has suggested that firms with high expectations recognize that their current strategies are unlikely to lead to performance outcomes that would satisfy those high aspirations

levels. Thus, high aspirations have been shown to promote engagement in riskier strategies including entering new markets (Greve, 1998), establishing corporate VC units (Gaba & Bhattacharya, 2012) and even engagement in illegal actions (Mishina et al., 2010). The authors argue that VC firms face such high expectations from their limited partners because reputation is the limited partners' primary concern when selecting VC firms with which to invest their money (Gompers, 1996; Lee & Wahal, 2004).

With respect to their prediction that reputed VCs will make greater use of risk management strategies such as investing in later stage startups, and syndicating their investments, the authors argue that these risk management strategies are used with the objective of protecting their reputation. Reputation-building is expensive and takes a considerable amount of time. Thus, firms that achieve a good reputation are concerned about trying to protect it and tend to persist with current strategies.

Perceptions of risk are highly subjective in the absence of clear criteria to guide decision makers (Fiske & Taylor, 1991) and are associated with costs of being wrong (Freund, Kruglanski, & Shpitzajaan, 1995; Tetlock, 1983). An established reputation increases the potential cost of bad decisions because of the disproportionately high reputational damage suffered by highly reputed firms (Rhee & Haunschild, 2006). Prior research on VC funding has demonstrated that VC firm reputation among limited partners is dependent on their ability to deliver expected returns (DeClerq et al., 2006; Dimov & Gedajlovic, 2010). Consequently, their concern about reputational damage is likely to make reputed firms perceive decisions under ambiguity as more risky and therefore resort to risk management strategies including syndication, investing in later stage ventures and limited commitment to the sector.

Decision Biases

In a paper on sequential investment decisions made by VC firms, Guler (2007) provides qualitative and quantitative evidence of biases in VC decision making. Her study found that as they provide more rounds of financing to a startup, VC firms become less likely to terminate investments even if there is evidence of declining expected returns from their investment.

The author argues that this decline in VC firms' likelihood of terminating investments may be a consequence of biases on the part of the individuals involved in the decision. More specifically, she argued that individual decision makers are likely to escalate their commitment to a failing course of action (Staw, 1976; 1981; Staw & Fox, 1977; Teger, 1980; Arkes & Blumer, 1985; Brockner & Rubin, 1985). According to the literature, there are four factors that contribute to this escalation. First, individuals tend not to update their beliefs even when they receive new information (Nisbett & Ross, 1980; Kahneman, Slovic, & Tversky, 1979; Arkes & Bluner, 1985; Whyte, 1986). Second, individuals do not treat prior investments as sunk costs (Thaler, 1980; Arkes & Blumer, 1985). Third, they frame subsequent investments as opportunities to recover losses incurred previously (Kahneman & Tversky, 1979; Arkes & Blumer, 1985; Whyte, 1986). Fourth, individuals tend to stick to their prior decisions in order to save face and avoid cognitive dissonance (Staw, 1976; Tetlock, 1985).

Guler (2007) argues that, in contrast to individuals, organizations should have no difficulty in terminating commitments to projects when negative information is received because they have a number of potential safeguards such as budgets, performance targets, accountability, and feedback regarding the economic outcomes of their decisions. Nevertheless, at least in the VC context, the effectiveness of these safeguards may be limited due to institutional and political constraints. Terminating an unsuccessful project may lead the partner who championed it to lose face or even

lose employment (Fox & Staw, 1979; Brockner & Rubin, 1985). In order to avoid these outcomes, the manager may try to keep the project alive by using different sources of power and social influence, forming coalitions with other interested parties, and bargaining with other members of the organization. Such political influences are likely to increase with the size of the organization.

According to Guler (2007), another reason organizations may not easily terminate investments is institutional pressures which may take the form of coercive, normative or mimetic influences. For example, VC firms may be coerced by contractual obligations to co-investors which would penalize them for exiting from an investment. Coercive pressures are likely to increase with the number of co-investors because severing ties with a larger number of partners is likely to lead to greater penalties for the focal firm. Another source of coercive pressures is the limited partners. The limited life of each fund forces VCs to exit their investments at the end of the fund's life and to show high returns from the funds in order to be able to raise future funds. Due to this, they are more likely to make new investments during the fund's early years and continue to support existing investments later in the fund's life because during the later years, there is not enough time for newly funded startups to reach maturity and allow the VC firm to successfully exit via an acquisition or initial public offering (IPO).

VC firms may also face pressures to continue with the investment because that is the industry norm, and deviating from it may damage the firm's reputation and lead to punishment in terms of fewer syndication opportunities in the future. However, such normative pressures are not likely to be felt by high-status organizations because their status insulates them from sanctions due to non-compliance. Lower-status organizations, on the other hand, are likely to lose their legitimacy as a result of sanctions, and thus, are likely to defer to decisions of the high-status firms. Finally, sequential investment may persist because organizations imitate other organizations, especially those that are highly visible or high status.

In sum, the study suggests that there may be a tradeoff between individual and organizational constraints on decision making in organizations such that the very mechanisms – individual responsibility, collective decision making, and syndication – that were designed to safeguard against decision biases, may create perverse incentives for VC firms to make decisions that are suboptimal.

CONCLUSION

The VC industry has received a considerable amount of research attention in the last 30 years and this interest continues today. A large portion of this research has sought to identify the factors that predict which new ventures will receive VC funding. Factors such as the founder/ founding team's personality and characteristics, the product, the market and the cash out potential of the potential funding opportunities have been identified as important in VC funding decisions. Research interest in this topic has continued in recent years. This recent research has not only identified some new criteria as predictors of VC funding decisions, it has also demonstrated that the effects of previously identified criteria can be more nuanced than previously thought.

APPENDIX

Papers Included in this Review

S. No.	Author(s)	Year	Journal
1.	Beckman, Burton, & OReilly	2007	Journal Of Business Venturing
2.	Bengtsson & Hsu	2015	Journal Of Business Venturing
3.	Chen, Yao, & Kotha	2009	Academy Of Management Journal
4.	Dai, Jo, & Kassicieh	2012	Journal Of Business Venturing
5.	Dimov, Shepherd, & Sutcliffe	2007	Journal Of Business Venturing
6.	Guler	2007	Administrative Science Quarterly
7.	Hegde & Tumlinson	2014	Management Science
8.	Khoury, Junkunc, & Mingo	2015	Journal of Management
9.	Kirsch, Goldfarb, & Gera	2009	Strategic Management Journal
10.	Li	2008	Journal Of Business Venturing
11.	Li & Chi	2013	Strategic Management Journal
12.	Li & Mahoney	2011	Journal Of Business Venturing
13.	Patzelt, ZuKnyphausen-Aufseb, & Fischer	2009	Journal Of Business Venturing
14.	Petkova, Rindova, & Gupta	2013	Organizational Science
15.	Petkova, Wadhwa, Yao, & Jain	2014	Academy Of Management Journal
16.	Petty & Gruber	2011	Journal Of Business Venturing
17.	Pontikes	2012	Administrative Science Quarterly
18.	Wry & Lounsbury	2013	Journal Of Business Venturing
19.	Wry, Lounsbury, & Jennings	2014	Academy Of Management Journal

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