

ACSEP Basic Research Working Paper No. 1

Venture Capital Practices: Do They Matter for the Expected Performance of Social Investment Funds?

By Swee-Sum Lam, Siew Meng Leong, Sze-Min Lek

Executive Summary

Social investments have existed for many years in the form of government funding and grants given to non-profit organizations. Recently, social investment funds (“SIF”) have emerged and applied venture capital principles to their investments. At first glance, there are many possible advantages from adopting these principles, such as “goal congruence” (alignment of goals and values of partners for better performance), “quality evaluation” (choosing projects of higher quality and success likelihood), and “value-added” (coaching and transfer of knowledge). However, these hypothesized advantages have not been tested in real data.

This study examines whether adopting the venture capital principles has brought higher returns (via social, environmental, financial dimensions) for the SIF by evaluating constructs and testing their relation with three dimensions of returns.

The constructs are evaluated from responses to a survey of SIF. For example, “goal congruence” was evaluated by the degree of similarity between SIF and investee firms along three dimensions such as objectives, values, and cultures. “Quality evaluation” was evaluated by “developing an execution plan”, “validation with external sources”, “having high benchmarks”, “developing an exit plan and attention paid to due diligence”.

Each dimension of the social, environmental and financial returns is evaluated with three items: “obtaining significant returns”, “positive impact and sustainability”, and “achieving higher-than-expected returns”. This method allowed social investment funds to assess their own performance by looking at their returns from multiple dimensions and evaluating them against their own objectives and goals.

The study has three main findings. First, higher goal congruence between SIF and portfolio firms is associated with higher-than-expected returns for all three dimensions of financial, social and environmental returns. Thus, goal congruity is critical for SIF’s performance.

Second, higher quality evaluation processes by social investment funds is associated with higher-than- expected financial returns but not social and environmental returns. This may be due to a lack of a consensus between investor and investee in measuring social and environmental returns, evaluating performances and assigning attribution for social purpose firms even within the same sector.

Lastly, higher value-add by SIF is related to higher-than-expected financial returns but not social and environmental returns. This may be explained by SIF managers’ lacking relevant competencies, skills or networking resources as social purpose organisations tend to have diverse missions even within the same sector.

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This version: August 2010

Abstract

This is an exploratory study surveying social investment funds vis-à-vis green funds which apply traditional venture capital investment principles. We find that venture capital practices, to varying extent, do matter for the expected performance of social investment funds. Expected performance is measured using a blended value approach in three independent dimensions of financial, social and environmental returns. As constructs for contributions from venture capital practices, goal congruence, evaluation processes and value-add carry varying impact on expected fund performance. Extended engagement by social investment funds in value-add activities has no significant role to play in the social purpose organization's performance in the near term. Goal congruence, which is being evaluated on in the deal screening phase, is found to positively and significantly influence all three returns. Evaluation processes in due diligence are associated with higher than expected financial returns only and have no significant impact on expected social or environmental returns.

Keywords: venture capital, venture philanthropy, social investment funds, goal congruence, evaluation processes, value-add

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1. Introduction

Social investments have existed for many years in the form of government funding and grants given to non-profit organizations. More recently, social investment funds have emerged, and applied venture capital principles to their social investments. Emerson, Freundlich and Berenbach, (2004) have presented a broad spectrum of investor institutions ranging from philanthropic funds to conventional for-profit organizations such as banks and mutual funds, thereby demonstrating the range of investors who potentially operate in this space. Funds claiming to use social considerations and screens in choosing portfolio firms have been described variously as ‘green’, ‘ethical’, ‘mission-driven’, ‘sustainable’, ‘socially responsible’ (Haigh, 2006). Furthermore, a form of high-engagement philanthropy called ‘venture philanthropy’ has gained much attention among philanthropists and social sector investors (Letts, Ryan and Allen, 1997; Carrington, 2003; John, 2006; Martin and John, 2006; Emerson, Freundlich and Fruchterman, 2007; Neck, Brush and Allen, 2009).

Oftentimes, social investment funds invest into social purpose organizations. There is an increased awareness in recent decades of social entrepreneurship and its contributions to both economy and society (Sharir and Lerner, 2006; Neck et al., 2009). Globally, there has also been a significant increase in the number of social entrepreneurs and social purpose organizations operating in the social sector, each differing in their scope of activities, area of operations, purpose and mission (Letts, Ryan and Grossman, 1999; Drayton, 2002; Bornstein, 2004). Accordingly, with the increased financing needs of these social purpose organizations, the social investment industry has also grown.

Letts, Ryan and Grossman (1997) made a call for venture capital practices to be applied to social investments decision-making. Following venture capital practices, social investment funds would assess, provide innovative funding solutions, add value and monitor investments (Emerson et al., 2007; Scarlata and Alemany, 2008). However, despite the rising prominence of venture capital practices in the social sector, little empirical work is being done because of the challenges of confidentiality and resource constraints. Scarlata and Alemany (2009) are the first to attempt a

comparison of the deal flow and screening processes for a sample of philanthropic venture capitalist and for-profit venture capital funds in a survey with 40 respondents.

This is perhaps one of the first studies which attempt to explore the impact of venture capital practices on the triple bottom line of social investment funds. We raise a few questions: Are social investment fund managers' pre-investment and post-investment processes enhancing the expected returns, in the appropriate dimension(s) of financial, social or environmental returns? To what extent have social purpose organizations been receptive of extended engagement by social investment funds in their mission and operations? To what extent, therefore, have venture capital principles been actually practised in social investing?

To address some of these questions, our study draws from the scholarly literature of business entrepreneurship and venture capital and applies them to the study of social investment funds (Owen, 1990; Emerson, 2003). Social exchange theories and learning theories are used to explain goal congruence and its effect on expected performance. As well, theories from venture capital literature are applied to study the evaluation process and value added dimension of social investment funds and their effects on fund performance.

We critically evaluate three factors that have surfaced in alliance and venture capital literature, specifically goal congruence, evaluation processes and value-add and their effects on fund performance. By drawing on theories from pre-investment (i.e. evaluation processes) and post-investment (value-add) stages, this study explores how social investment funds perform when applying venture capital principles to social investments. Adopting a multi-disciplinary approach, social exchange, partnerships and alliance theories are applied to evaluate goal congruence between social investment funds and their constituent portfolio firms. This study seeks to extend these theories to social investments.

Firstly, we find that the three constructs, goal congruence, evaluation processes and value-add, all load in the same factor in our principal component analysis. We propose that all three constructs are measures of the contributions of venture capital practices. They are all significantly and positively correlated pair wise and therefore would proxy for one another to varying extent.

Secondly, the study extends the blended value proposition to evaluate social investment fund performance. This is probably one of the first surveys where social investment funds assess their own performance by looking at their returns from multiple dimensions. Lastly, the findings of this study will be of value in informing social investment fund managers of possible factors that could affect fund returns in each of the three dimensions identified.

This study deviates from the usual method of using growth to measure performance of a social investment fund (De Clercq and Sapienza, 2006; Sharir and Lerner, 2006; Colombo and Grilli, 2009). Instead, it focuses on assessing the triple-bottom-line as a measure of expected performance. This provides a multi-dimensional view of an organization's performance. A key assumption within this study is that social purpose organizations pursue an embedded value proposition that consists of financial, social and environmental returns (Emerson, 2003). We posit that social investment funds, therefore, are also subject to the same returns profile as their portfolio firms. As such, social investment funds' performance is measured by expected financial, social and environmental returns.

Thirdly, we design and validate constructs of expected performance of social investment funds in a blended value approach. In order to maximize validity, this study examines the expected performance of funds that operate within the same industry and utilise similar fund donors. Expected fund performance is crucial as it drives future social investments, further encourages innovation in structuring social purpose investments and enhances the industry's financial sustainability. While expected performance may present a subjective view of the fund, however, there are no established measures, indices or benchmarks against which social investment funds and social purpose organizations can be accurately and objectively compared. This difficulty in formulating performance measures to facilitate comparisons and evaluations is further accentuated by the inherent differences between industries in the social sector (Voon, 2001; Mahoney and Potter, 2004; Ebrahim and Rangan, 2009b; DeGroff, Schooley, Chapel and Poister, 2010). These constructs facilitate our study to identify the factors that will affect social investment fund performance.

Fourthly, our findings suggest that venture capital practices, when applied to social investment funds, do not all draw significant financial performance or sustainability as expected. Of the three constructs of venture capital practices, we find that only higher goal congruence and quality evaluation process in the pre-investment stage is significantly associated with higher than expected financial return on a social investment fund. Findings imply that fund managers do not expect any value-adding practices post-investment would enhance the financial return on their funds.

Moreover, this study highlights the significance of goal congruity for social investing, especially for fund performance in all three dimensions of financial, social and environmental returns. While goal congruity has been shown to have a significant impact on alliance performance (De Clercq and Sapienza, 2006; Weber and Weber, 2007), this finding extends the venture capital literature to social investing. Specifically, shared organizational goals, values and culture can lead to greater mutual learning and knowledge transfer and therefore enhance portfolio firm returns to the social investment fund in more than one dimension. On the other hand, social investment fund managers do not expect the pre-investment stage evaluation process to add to both social and environmental returns. While this study finds that venture capital principles are only practised to some extent for social investing, the robust construct for the contribution of venture capital practices that flows through to the three dimensions of financial, social and environmental returns is goal congruity.

This exploratory study generates hypotheses for future research. Although venture capitalists have typically been assumed to depend on a set of effective vicarious selectors that allows them to identify potentially successful firms for investment (Shepherd, Zacharakis and Baron, 2003), only a small number actually succeed, and most only achieve average returns (Gorman and Sahlman, 1989; Gifford, 1997). This suggests that venture capitalists have not yet discovered a “predictive template” (Aldrich and Kenworthy, 1999) for identifying successful firms given the high risk involved in venture investing. This begs the question of whether the evaluative processes of venture capitalists can be extended to predict social investment funds’ performance in the social and environmental dimensions. Based on the findings of this exploratory study, we hypothesize that evaluation processes of social investment funds (as in performing due diligence, structuring for co-investment in risk sharing) will not necessarily enhance expected social and environmental returns. This is due to the current lack of consensus on measures for social and environmental

returns, and more importantly, the lack of an operational basis and valid data for comparative performance evaluation and attribution across social purpose organizations even within the same “sector”. Based on the findings of this exploratory study, we also hypothesize that the typical post-investment stage value adding activities of a venture capitalist cannot be applied to the same extent in venture philanthropy because social investment fund managers may not have the relevant competence, skills or networking resources to add to all portfolio firms’ social or environmental returns. This is because social purpose organizations can be diverse in missions and focus even within the same sector (like microfinance, health and sanitation, housing, disaster relief, youth, senior, advocacy, etc.). Moreover, each social purpose organization tends to be personality driven and idiosyncratic. Faced with a highly segmented labor market for social entrepreneurs, the venture philanthropist’s challenge of replacing a social entrepreneur is even more challenging than that for a venture capitalist. Therefore, the effectiveness of a venture philanthropist’s value adding services flows beyond goal congruity; it depends on its discipline to adhere to a narrow definition of the target sector which maps directly to the competence and skill sets of its own management team as well as its ability to find reception in entrepreneur-coaching.

In the next section, we develop the hypotheses from a critical reading of relevant literature to evaluate the adoption of venture capital practices by social investment funds. Section 3 discusses the data and the method. Section 4 presents the empirical analysis and main findings. Section 5 concludes with a discussion of the contributions and limitations of this research and suggests directions for future research.

2. Theoretical Framework

2.1 Measures of Performance

As opposed to economic entrepreneurship in the conventional sense, social ventures additionally consider the dimensions of social and environmental value and contribution (Kanter and Summers, 1987). Using the blended value proposition (Emerson, 2003), fund performance is evaluated by measuring financial, social and environmental returns to account for the multidimensional aspects of social investments.

However, the challenge is the development of a set of social performance data, which allows for comparative analysis across funds (Kendall and Knapp, 2000; Cunningham and Harris, 2001; Acumen, 2006). Each social sector may have different benchmarks and the yardsticks used in one context might not be applicable to other sectors. Therefore, social investment fund performance measures tend to be context-based and have to be carefully assessed, and more so, if evaluation is done across funds.

In this section, we review the relevant literature on factors that may affect social investment funds' performance, specifically goal congruence, evaluation processes and value-add. Since the venture capital practices have yet to find substantive empirical support in social investing, we will only go so far as to hypothesize their effects on social investment funds' financial return, which is the consensual performance measure for a traditional for-profit business. The exploratory part of this study then evaluates whether venture capital practices apply to the other dimensions of social return and environmental return in the blended value framework.

2.2 Goal Congruence and Expected Performance

The organizational goals of social investment funds and their portfolio firms could differ greatly (Sapienza and Gupta, 1994). Goal congruence refers to the degree to which there is a convergence of goals and values between exchange partners (Nahapiet and Ghoshal, 1998). Increases in goal congruence leads to an increase in the amount and quality of information exchanged (De Clercq and Sapienza, 2006). In addition, prior research has examined the presence and effect of shared goals and values on performance, finding that goal congruence increases the absorptive capacity of firms (Cohen and Levinthal, 1990; Lane and Lubatkin, 1998; Lane, Salk and Lyles, 2001).

When partners share similar goals, they could also be more willing to share their knowledge base. However, if goal congruence is not established, partners are more likely to keep information to themselves for fear of losing perceived advantages (Larsson, Bengtsson, Henriksson and Sparks, 1998). In the same light, other authors have posited that goal conflict between funds and their portfolio firms can result in a diminished willingness to share information (Busenitz, Moesel, Fiet

and Barney, 1997; Cable and Shane, 1997; Gifford, 1997). Also, it has been found that top management share information more readily when 'mutuality' in goals is recognised and established among partners, thus decreasing unconstructive conflict and allowing for more efficient decision making (Amason and Sapienza, 1997).

Hypothesis 1. Higher goal congruence between social investment funds and portfolio firms is associated with higher than expected financial returns.

The following two factors could be seen as two distinct processes within the investment process of social investment funds, specifically the evaluation processes in the pre-investment phase and value-add to social investments in the post-investment phase.

2.3 Evaluation Processes and Expected Performance

Much research has been focused on the processes by which venture capitalists select and monitor potential investments (Macmillan, Siegel and Narasimha, 1985; Macmillan, Zemann and Subbanarasimha, 1987; Brophy and Verga, 1988; Hall and Hofer, 1993; Admati and Pfleiderer, 1994; Hellmann, 2000; Hellmann and Puri, 2002; Baum and Silverman, 2004; Busenitz, Fiet and Moesel, 2004; Dimov and Shepherd, 2005; Florin, 2005; Colombo and Grilli, 2009). These processes have been expressed as a decision process model consisting of five sequential stages: deal origination, screening, evaluation, structuring and post-investment activities (Tyzoon and Bruno, 1984). A six-stage screening process model has also been developed and this finds that venture capitalists focus their attention differentially across these criteria at different stages of their evaluation (Fried and Hisrich, 1994).

The evaluation process is defined as the pre-investment stage, which includes sourcing, screening, evaluation and structuring. This evaluation process is crucial especially under conditions of information asymmetries. The inherent uncertainty associated with new venture investments and entrepreneurship also hinders the development of complete contracts that are able to cover all contingencies (Grossman and Hart, 1986). Venture capitalists spend a significant amount of time on their evaluation process to choose projects (Sahlman, 1988; 1990b) and that only one percent

of the projects submitted to venture capitalists requesting funding actually obtain financing (Fenn, Liang and Prowse, 1995). This highlights the importance of the evaluation process. High quality evaluation processes could be defined as having many checks and balances and high benchmarks against which potential investments can be measured (Macmillan et al., 1985; Macmillan et al., 1987; Hall and Hofer, 1993; Baum and Silverman, 2004; Franke, Gruber, Harhoff and Henkel, 2008; Van Deventer and Mlambo, 2009). In addition, venture capitalists tend to validate their investments with external sources, (such as their networks) in order to reduce uncertainty (Casamatta and Haritchabalet, 2007). Their expertise in screening and choosing high quality ventures generate signals of the project's true quality (Steier and Greenwood, 1995; Stuart, Hoang and Hybels, 1999; Casamatta and Haritchabalet, 2007) and thus aid them in obtaining their expected returns.

Therefore, we test the following hypothesis on the pre-investment evaluation process when applied to social investment funds:

Hypothesis 2. Higher quality evaluation processes by social investment funds is associated with higher than expected financial returns.

2.4 Value-add and Expected Performance

Prior research has also touched upon the value-add activities of venture capitalists due to their involvement in their investments (Fried and Hisrich, 1995; Manigart, Waele, Wright, Robbie, Desbrières, Sapienza and Beekman, 2000), the venture capitalists' role in monitoring (Admati and Pfleiderer, 1994; Steier and Greenwood, 1995; Sweeting and Wong, 1997), directly controlling entrepreneurs (Lerner, 1995; Hellmann and Puri, 2002) and providing managerial assistance and advice (Gorman and Sahlman, 1989; Sahlman, 1990a; Bygrave and Timmons, 1992; Gompers and Lerner, 1999; Hellmann and Puri, 2002).¹

¹ Casamatta, (2003), Schmidt, (2003) and Repullo and Suarez, (2004) discuss the theoretical importance of this advising role.

Finance theory also argues that venture capitalists must possess relevant expertise, such as superior information, qualified understanding and the ability to make interpretations when investing under conditions of high uncertainty. Venture capitalists also aid in entrepreneurial learning such as by imparting knowledge, spurring and enhancing understanding and creating a sound platform for further learning (Berglund, Hellström and Sjölander, 2007). One of the fundamental sources of value added by investment funds is that funds are well-versed and skilled at providing expertise, sound business judgment and practices (Hellmann, 2000) and at enforcing market discipline on their portfolio firms (Ebrahim and Rangan, 2009a; 2009b). Funds have also been shown to value-add by facilitating their portfolio firms in obtaining other necessary resources (Megginson and Weiss, 1991; Stuart et al., 1999; Anand and Piskorski, 2008). Literature has shown that venture capitalists are actively involved in their investments beyond merely providing funding, and participate in strategic management issues such as strategic alliances (Huyghebaert and O'Donohoe, 2007).

Venture capitalists have repeated interactions with the firms that they invest in (Gorman and Sahlman, 1989) in order to extract information about the true quality of their investments and in order to exit the investments that prove less promising (Gompers, 1995). Furthermore, research has shown that firms that have received venture capital funding have outperformed comparable firms that did not receive similar funding (Sandberg, 1986; Megginson and Weiss, 1991; European Venture Capital Association, 1998, 2005; Timmons and Spinelli, 1999). In addition, Venture Capital-backed Initial Public Offerings do not suffer from similar long-run underperformance as compared to non Venture Capital-backed Initial Public Offerings (Brophy and Verga, 1988; Brav and Gompers, 1997). Thus, a fund's ability to ensure that the portfolio firm is well managed and provide value added services post-investment would tend to yield superior firm performance. This would in turn achieve higher returns for the investment fund and thus improve fund performance (Jain and Kini, 1995; Hellmann and Puri, 2002).

Again, we test this hypothesis on the post-investment value-adding process when applied to social investment funds:

Hypothesis 3. Higher value-add by social investment funds is associated with higher than expected financial returns.

3. Data and Method

3.1 Method

This study performed both qualitative and quantitative analysis to assess the determinants of social investment funds' expected performance. Exploratory interviews were conducted with various social investment funds to better understand practitioners' views of the industry. The interviews provided necessary insight into the social investment industry and also identified determinants that might affect funds' expected performance. Hence, a survey instrument was designed and pre-tested with a preliminary sample of social investment funds to check for construct validity. Based on the primary data generated from the survey, we conduct a quantitative study of the determinants and their effects on funds' expected performance.

In the absence of objective measures for most of this study's constructs, the latter were operationalized as multi-item scales. When possible, prior research was used to derive the constructs and their respective measurement items.

Several methods were used to ensure validity and reliability. As mentioned above, the survey instrument was pre-tested with fund managers. All statement-style items were measured using a 5-point Likert type scale from 1 (Strongly Disagree) to 5 (Strongly Agree) for both independent and dependent variables. Covariates were tested for using single item measures and a combination of open-ended questions and multi-response questions. Factor analysis with Varimax rotation was used to test for construct validity.

We then evaluate the following three models using multivariate regression analysis:

$$\begin{array}{l}
 \text{Financial Return} \\
 \text{Social Return} \\
 \text{Environmental Return}
 \end{array}
 =
 \begin{array}{l}
 \alpha_0 + \alpha_1(\text{Goal Congruence}) + \alpha_2(\text{Evaluation Process}) \\
 + \alpha_3(\text{Expected Value Add}) \\
 + \beta_1(\text{Number of Fund Managers}) \\
 + \beta_2(\text{Ln Fund Size}) + \beta_3(\text{Source of Funds}) \\
 + \beta_4(\text{Fund Life}) + \beta_5(\text{Years of Experience}) \\
 + \beta_6(\text{Fund Type}) + \beta_7(\text{Investee Type}) \\
 + \beta_8(\text{Required Financial Return}) + \epsilon_i
 \end{array}$$

3.2 Data

Due to the lack of established scales to measure performance of social investment funds, this study uses the blended value proposition as a guide to assess fund performance (Emerson, 2003). For financial, social and environmental returns, the scales were constructed according to the following dimensions: obtaining significant returns, positive impact and sustainability as well as achieving higher than expected returns.

The independent variables comprise the constructs: goal congruence, evaluation process and value add, as well as the control variables. Goal congruence refers to the degree to which there is a convergence of goals and values between exchange partners (Nahapiet and Ghoshal, 1998; De Clercq and Sapienza, 2006). It is tested along three dimensions, similar objectives, similar values and similar cultures, as modified from Sapienza, (1992) and Tsai and Ghoshal, (1998).

Evaluation processes refers the “scout” function (Baum and Silverman, 2004; Colombo and Grilli, 2009). Venture capitalists are assumed to have developed a set of criteria upon which they make

their investment decisions (Franke et al., 2008; Payne, Davis, Moore and Bell, 2009; Van Deventer and Mlambo, 2009). Venture capitalists obtain information through their networks regarding possible investments and thus are able to benchmark opportunities against each other (Macmillan et al., 1985; Bygrave, 1987, 1988; Macmillan et al., 1987; Baum and Silverman, 2004; Casamatta and Haritchabalet, 2007). A five-item scale, comprising of developing an execution plan, validation with external sources, having high benchmarks, developing an exit plan and the attention paid to due diligence, is constructed to measure the quality of the evaluation process.

Value-add accrues from the “coach” function of venture capitalists post-investment when they provide additional competencies and resources to their portfolio firms (Baum and Silverman, 2004; Colombo and Grilli, 2009). This is usually done through the fund and its networks that have the relevant expertise. A four-item scale is constructed consisting of size of network, network having diverse and appropriate expertise (de Carvalho, Calomiris and de Matos, 2007), meeting the needs of investees and providing valuable non-financial services to test the value-add of venture capitalists (Berglund et al., 2007).

3.3 Control Variables

Due the variance within the sample, it is necessary to control for various firm-specific factors. Firm-specific characteristics are controlled for fund’s human capital (number of fund managers) (Cumming, 2006; Nahata, 2008; Colombo and Grilli, 2009; Zarutskie, 2010) where the human capital is expected to have a positive impact on expected performance. Similarly, fund size (dollar amount) (Casamatta and Haritchabalet, 2007; Colombo and Grilli, 2009) has been found to have an impact on portfolio size and fund investment decisions. This could in turn have an effect on funds’ expected performance. Also, fund source (Barnes and Menzies, 2005; Mayer, Schoors and Yafeh, 2005) and fund life (age of fund) (Cumming, 2006) affects the fundraising abilities and reputation of the fund, thus having a potential positive association to fund expected performance.

We next consider the investment-specific control variables. Years of experience (Casamatta and Haritchabalet, 2007) is measured in the number of years the fund has experience investing in similar types of investees, as it is proposed that experience plays a significant role in predicting

performance (Shepherd et al., 2003; Casamatta and Haritchabalet, 2007; Nahata, 2008). Fund type is coded as a dummy variable (0 = Social investment funds and 1 = Green funds) to capture any differences between these two types of funds. Both types of funds are included in the sample to address the range of investors who might invest in the social sector (Emerson et al., 2004). The funds within this sample could invest in various types of portfolio firms. Therefore, we control for investee type (traditional for profit, social purpose organization and/or social entrepreneur). Lastly, we use the type of financial instrument used to finance portfolio firms as proxy for the fund's required financial return.

3.4 Sample

We hand-collected a sample of social investment funds, ranging from foundations with a venture philanthropy arm, venture philanthropy funds, social venture funds and green funds that are operating in various social sectors. The sample funds were identified from European Venture Philanthropy Association's directory, previous surveys (Community Wealth Ventures, 2002; John, 2006; JPA Europe Limited, 2008), as well as InvestorIdeas database of Green Funds.

We draw a purposive sample of 520 funds (120 VP and social venture funds and 400 Green funds) at the time of the survey (December 2009 – January 2010). Social investment funds that are active, highly engaged and well informed about the industry are selected for the survey. The same survey instrument was used for both types of funds, Venture Philanthropy (VP) plus Social Venture Funds and Green Funds. The four-page questionnaire was sent to top management personnel such as CEOs, Managing Directors or Chief Investment Officers. It is expected that these respondents would be actively involved in investment making for their funds. A total of 264 returns (121 VP and Social Venture Funds and 143 Green Funds) were obtained.² This indicates a 41 percent response rate (for 50 fund respondents) for VP plus Social Venture Funds and a 14 percent response rate (for 55 fund respondents) for Green Funds. Of the 264 returns received, 105 fund respondents were deemed sufficiently complete. To the best of our knowledge, this is the first

² There could be more than one return from a particular fund, e.g. from both the CEO and the CIO. However, for the computation of the response rate, this is deemed as one fund response.

study that adopts a quantitative approach in discriminating hypotheses on the determinants for expected performance of social investment funds.

We find no significant non-response bias. This was analyzed by testing for statistically significant differences in responses between respondents and non-respondents for a number of variables (Armstrong and Overton, 1977). The small number of missing values was treated with means replacement in STATA, taking into account idiosyncratic response tendencies. Table 1 tabulates the mean, standard deviation and correlation matrix for the venture capital practice constructs, the blended value constructs and control variables.

Table 1 Means, Standard Deviations and Correlations

The table provides summary statistics for the venture capital constructs, the blended value constructs and control variables. Significance for correlation of the variables at one percent and five percent for a 2-tailed test is denoted by *** and ** respectively.

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1 Goal Congruence	4.112	0.638	1																
2 Evaluation processes	4.181	0.812	.315***	1															
3 Value-add	4.381	0.709	.358***	.347***	1														
4 Financial Return	3.562	0.978	.276***	.258***	.225**	1													
5 Social Return	3.886	1.047	.236**	-.019	.061	-.154	1												
6 Environmental Return	3.178	1.173	.180	-.012	.095	.387***	.051	1											
7 Number of Fund Managers	7.108	11.061	.042	.130	.098	.060	-.089	.077	1										
8 Lon Fund Size	7.518	0.943	-.060	.154	-.038	.337***	-.493***	.210**	.330***	1									
9 Source of Funds	0.619	0.488	.119	.103	.048	.487***	-.456***	.427***	.041	.509***	1								
10 Fund Life	9.794	10.394	-.048	-.139	-.192	-.025	.146	-.084	.115	.036	.034	1							
11 Years of Experience	10.048	6.661	.038	.014	.023	.374***	-.027	.247**	-.086	.213**	.177	.036	1						
12 Fund Type	0.524	0.502	.008	.048	.069	.472***	-.599**	.466***	.102	.626***	.783***	.006	.263***	1					
13 Social Entrepreneur	0.343	0.477	-.065	-.025	-.091	-.403***	.400***	-.276***	-.026	-.478***	-.632***	.060	-.141	-.677***	1				
14 Socially Driven Enterprise	0.438	0.499	.090	.004	-.069	-.247*	.502***	-.277***	-.077	-.317***	-.493***	.213**	-.096	-.580***	.373***	1			
15 Traditional For-Profit Business	0.590	0.494	-.118	-.101	-.044	.461***	-.587***	.365***	.070	.610***	.663***	-.240**	.170	.718***	-.582***	-.553***	1		
16 Required Financial Return	0.676	0.470	.059	-.084	.013	.448***	-.428***	.425***	.007	.456***	.798***	-.115	.201**	.685***	-.572***	-.373***	.707***	1	

3.5 Diagnostic and Construct Validation

Both the dependent and independent variables respectively were factor analyzed. The three dimensions of return – financial, social and environmental return - loaded independently. After factor analysis, the three constructs: goal congruence, evaluation process and value-add, as well as the three dimensions of returns were finalized after checking for internal consistency and convergent validity.³ Table 2 presents the principal component analysis that gives us four principal components.

Table 2: Principal Component Analysis

We use principal component analysis to identify commonalities among the venture capital practice constructs, the blended value constructs and control variables. Four principal components are identified and the factor loading score for each orthogonal solution represents how the variables are weighted for each principal component. Variables that load strongly for each principal component are in bold and denoted by the bracket. The individual proportion of variance accounted by each principal component and the cumulative proportion of variance are displayed at the bottom of the table.

Variable	For-profit Investment	Contributions from VC practices	Investment Horizon	Human Capital
Goal Congruence	-0.0037	0.7470	0.0237	0.1071
Evaluation Processes	0.0524	0.7202	0.0359	-0.2138
Value-add	0.0414	0.6533	-0.2489	-0.0456
Number of Fund Managers	0.0679	0.0645	0.1007	-0.8883
Lon Fund Size	0.6826	0.0131	0.1751	-0.4018
Source of Funds	0.8753	0.1532	0.0620	0.0205
Fund Life	-0.0769	-0.0765	0.8585	-0.1395
Years of Experience	0.3273	0.1173	0.4061	0.3978
Fund Type	0.9088	0.0432	0.0474	-0.0697
Social Entrepreneur	-0.7637	-0.0983	0.0112	-0.0252
Socially Driven Enterprise	-0.6215	0.1147	0.3665	0.0972
Traditional For-Profit business	0.8559	-0.1629	-0.2289	-0.0592
Required Financial Return	0.8362	0.0201	-0.0369	0.1125
Individual Proportion of variance	35.54%	12.34%	9.81%	8.49%
Cumulative Proportion of variance	35.54%	47.88%	57.69%	66.18%

Given the loadings in the four principal components, we identify the four principal components to be for-profit investment, contributions from venture capital practices, investment horizon and

³ The Cronbach's alpha of the constructs and the factor loadings of individual items are available from the authors upon request.

human capital capacity. The variables which load together in for-profit investment are lon fund size, fund source, fund type, investee type and required return. Interestingly, the three constructs of venture capital practices along different stages of the investment cycle all load together, making them proxies for each other. Only fund life loads into investment horizon. As well, only one variable, the number of fund managers, loads into human capital.

Data from the 105 fund respondents were used in multivariate regression analysis where the social investment fund's expected performance (in three independent return dimensions) is regressed on goal congruence, evaluation processes and value-add of social investment funds and other control variables. Table 3 summarizes the results and we discuss them in the next section.

4. Findings and Discussion

While we expect the venture capital practices, when applied to venture philanthropy and social investment funds, to predict financial performance but not social and environmental returns, we find interesting departures. Consistent with hypotheses 1 and 2, higher goal congruence and higher quality evaluation processes increases the social investment fund's expected financial return at the five percent significance level. But social investment fund managers do not expect value-adding services to enhance fund financial returns; and we reject hypothesis 3.

On social and environmental returns, we find that venture capital principles which are practised in screening for goal congruence enhance the expected social and environmental returns at the one and five percent significance levels respectively. Goal congruence can be positively associated with enhanced performance due to partners having a common 'dominant logic' where there are similar preferences about information processing and problem solving. Lane and Lubatkin (1998) argue that inter-firm relationships become more effective when similar commercial goals induce a common understanding. In international joint alliance literature, strategic consensus between partners has been shown to have a direct impact on performance (Homburg, Krohmer and Workman Jr, 1999; Boateng and Glaister, 2002). Furthermore, it has been posited that partners' understanding of each other's goals and motives for alliance formation will reduce uncertainty about future behavior (Ariño and De La Torre, 1998). Building on this, goal congruency has been

found to play a modifying role that lessens internal tensions (March, 1991; Koza and Lewin, 1998) and an initiator to form social trust and influence behavioral control within the alliance (Das and Teng, 2001).

Table 3 Multivariate Regression Analysis of Social Investment Fund Performance

The three dimensions of return, that is, financial return, social return and environmental return, are regressed on the venture capital practice constructs and control variables. Robust standard errors, adjusted for heteroskedasticity are displayed in parentheses below the coefficients. Significance at one percent, five percent and ten percent is denoted by ***, ** and * respectively.

Variables	Financial Return	Social Return	Environmental Return
Constant	0.228 (0.997)	5.899*** (1.084)	3.306** (1.529)
Goal Congruence	0.264** (0.124)	0.368*** (0.122)	0.313** (0.152)
Evaluation Processes	0.253** (0.116)	-0.191 (0.157)	-0.138 (0.150)
Value-add	0.158 (0.116)	-0.070 (0.117)	-0.034 (0.158)
Number of Fund Managers	0.004 (0.009)	0.006 (0.010)	0.018** (0.009)
Lon Fund Size	-0.034 (0.046)	-0.142*** (0.040)	-0.118 (0.076)
Source of Funds	0.194 (0.400)	0.195 (0.292)	0.238 (0.452)
Fund life	0.007 (0.009)	0.007 (0.006)	-0.016** (0.008)
Years of Experience	0.034*** (0.010)	0.026*** (0.010)	0.032** (0.013)
Fund Type	0.159 (0.359)	-0.629** (0.299)	1.076*** (0.394)
Social Entrepreneur	-0.093 (0.234)	0.002 (0.181)	0.197 (0.300)
Socially Driven Enterprise	0.110 (0.183)	0.419** (0.180)	0.091 (0.282)
Traditional For-Profit Business	0.599* (0.316)	-0.247 (0.276)	0.183 (0.395)
Required Financial Return	0.113 (0.326)	-0.170 (0.391)	0.224 (0.465)
Number of Respondents	105	105	105
R ²	.438	.532	.344

Based on our findings, we therefore hypothesize that goal congruence is expected to enhance social investment fund performance, not just financially, but also on the social and environmental dimensions as well. Applying the principle of goal congruence to social investments, we posit that sharing of the same goals, values and culture between the social investment fund and its portfolio firms can lead to greater insight into knowledge transfer and sharing of information and a more efficient and effective functioning of the fund and its portfolio firm. When both parties are focused on similar goals, mutual learning can be more efficiently achieved by wider and deeper (i.e. increased quality) communications which would enhance the portfolio firm's performance (De Clercq and Sapienza, 2006). Mutual understanding between the fund and its portfolio firms will result in fewer internal tensions. Being aligned towards congruent strategic motives should help partners to realize that they are working towards the same goal and reinforce the need for mutual commitment and interdependence for enhanced performance (Pak, Ra and Park, 2009). This interdependence (Zajac and Olsen, 1993) and having interdependent business networks is likely to lead to further mutual dependence, commitment, value creation and thus enhanced performance (Holm, Eriksson and Johanson, 1999).

Although the investment cycle has many distinct stages, each is related to the other and potentially affects the decisions made at each stage of the cycle. Prior research has also confirmed this relation in that the efficiency of the evaluation process impact upon the effectiveness of the value-add activities that occur after investment (Steier and Greenwood, 1995; Baum and Silverman, 2004; Casamatta and Haritchabalet, 2007). This interdependency is consonant with our principal component analysis that finds goal congruence, evaluation processes and value-add practices to load together into the second most dominant principal component, which we name as contributions from venture capital practices.

Apart from this, pre-investment due diligence activities and post-investment value-adding activities do not appear to matter for social and environmental returns. We postulate that a lack of measures and a common language among practitioners hinders the assessment of social returns. This also results in a lack of consensus within the industry regarding how a firm's social return can and should be assessed (Ebrahim and Rangan, 2009b). This is further accentuated by the industry diversity where social purpose organizations could be working in different segments (e.g.

ex-offenders versus youth-at-risk) or at different stages (e.g. prevention and/or cure). Evaluation criteria might need to be extensively modified to fit the contexts of social investments (Scarlata and Alemany, 2009). Thus, higher quality evaluation processes could result in dissipative, unproductive or even counter-productive due diligence work.

Nonetheless, we infer that venture capital principles are practised, not to the full extent, but in part, by social investment funds in their investing in social purpose organizations. Our postulates open up discussions for future research.

For similar reasons, setting up higher quality evaluation processes for the relatively young green industry may result in rejecting an innovative project for lack of appropriate benchmarks and does not necessarily result in identifying greener projects and hence generating higher expected environmental returns. Taking the diverse types of green technology available across industries (e.g. depending on which stage of environmental savings a company is targeting i.e. reduce, reuse and/or recycle), geographic location and country policies, each sector would need to design its own comparative benchmarks to guide investments. Yet, despite the lack of such assessment tools, there are nevertheless certain indicators such as carbon savings that have been recognized by many organizations. Carbon savings could serve as a viable indicator and a common baseline by which basic comparative analysis could be done. However, the choice of measures and how environmental returns are assessed is still very much dependent on the funds' choice and perceptions. That we find no systemic association of evaluation processes with expected environmental returns at this developmental or early stage of the green industry does not necessarily imply that the venture capital practices will not enhance environmental returns when the industry is more mature.

Again, our findings lead us to hypothesize that at this early stage of development of the venture philanthropy sector, the value adding activities of a social investment fund can have no systemic association with the fund's expected social and environmental returns. Literature documents that a fund's networks might not have a significant impact on the value-add dimension of a fund

(Sapienza, Manigart and Vermeir, 1996; Huyghebaert and O'Donohoe, 2007).⁴ In our interviews, some social investment fund managers have mentioned that working and contributing to the social sector is not as straightforward as their experiences in the private sector. Some would even go as far as to propose that for some portfolio firms, the best thing a fund could do to help is to provide funding and assistance when needed, instead of trying to interfere directly with the management of the social purpose organization. Thus, in the case of social and green investments, it could be that funds do not play a significant role in value adding to their portfolio firms other than providing funding.

We posit that for particular social and environmental sectors which are in the developmental or early stage of the industry life cycle, networks (Bygrave, 1988; Greve, 1995) and industry-specific expertise (Colombo and Grilli, 2009; Zarutskie, 2010) that could create a significant impact on performance are not yet established. For example, it took one of the interviewees 15 years to establish an extensive network through which to provide significant value-add to its portfolio firms. Adding on to this point of view, we argue that the establishment of networks, and more importantly, industry-specific expertise might require more than time and experience, as it also hinges on the fund's portfolio strategy.

That the value-adding activities of a social investment fund do not matter to social and environmental returns now does not imply that social investment funds do not add value to their portfolio firms. Instead, our findings could suggest that the effect of such value-add may not yet be apparent. This could also be due to the nature of the industry, as social returns measurement appears to be more subjective and social returns tend to require a longer term to recognize and achieve. This could be seen from the fact that investment periods (5-7 years) are typically longer than traditional venture capital investments (3-5 years) (Venture Philanthropy Partners and Community Wealth Ventures, 2004; John, 2006; Martin and John, 2006). Thus, at the point in time of this study, the impact of value-add on expected performance may not have been realized.

⁴ In an earlier study, Sapienza and Timmons (1989) document show that among a venture capitalist's non-financial services, networking capabilities are rated the highest

For funds that are operating in the more developed social or environmental sectors, we document another challenge to their value adding activities. Social investment funds can be diversified across geographic regions and/or industries (John, 2006; Ebrahim and Rangan, 2009a). A balance between diversification and specialization would depend on individual fund's experience, context and objectives (Campbell, 1990; Gupta and Sapienza, 1992; Cressy, Munari and Malipiero, 2007; April, 2009; Patzelt, zu Knyphausen-Aufsefl and Fischer, 2009) and would result in varying degrees of performance. Based on our exploratory interviews social investment fund managers, we posit that the specialization or diversification of investments has an effect on a social investment fund's capabilities to value-add effectively to their portfolio firms. Due to the more nuanced nature of the social sector, specialization in a particular industry might be a more viable option in order for funds to provide valuable non-financial services to their portfolio firms. Previous research also posits that specialization is useful for controlling portfolio risk, gaining access to networks, information and deal flow from other venture investors (Bygrave, 1987; 1988; Norton and Tenenbaum, 1993). Also, venture capital's specialized activities leads to valuable learning curve effects and thus more industry-specific expertise (Sahlman, 1990b). This thus leads to the funds being better able to understand the needs of their portfolio firms and use their resources and capabilities to value-add to them. Future research can refine the tests by controlling for the degree of diversification of social investment fund portfolios.

Table 4 summarizes the predicted and actual relation between goal congruence, evaluation processes and value-add activities of a social investment fund and its expected performance in a blended value framework.

Table 4 Summary of Hypotheses and Test Results

The table presents the predicted and actual relation between the venture capital practices (i.e. goal congruence, evaluation processes and value-add) and the three independent return dimensions of social investments (i.e. financial return, social return and environmental return). The relation are designated as (+/-/0), + if the relation is positive, - if the relation is negative and 0 if there is no relation. The predictions for social return and environmental return are not applicable as no predictions are made in this study.

Variables	Financial Return		Social Return		Environmental Return	
	Predicted	Actual	Predicted	Actual	Predicted	Actual
Goal Congruence	+	+	Not Applicable	+	Not Applicable	+
Evaluation processes	+	+	Not Applicable	0	Not Applicable	0
Value-add	+	0	Not Applicable	0	Not Applicable	0

5. Conclusion

A new trend of structuring social investments has emerged where funding is characterized as an investment as opposed to the more familiar notion of charitable grants. Within the social investment field, attention is now being placed on the performance of extensive due diligence (similar to that undertaken by venture capitalists) and on active monitoring and engagement with portfolio firms. This study adopts a quantitative method to test the effects of goal congruence, evaluation processes and value-add of social investment funds on funds' expected performance.

Our analysis suggests that the long investment horizon of social investment funds, in contrast to the relatively short investment horizon of the green funds, can explain their expected returns. Central to this study, contributions from venture capital practices indeed matter to social investment fund returns in a blended value framework. However, some differences in practices emerge when venture capital principles are applied to social investment funds.

Firstly, the extended engagement by social investment funds has no significant role to play in the social purpose organization's performance in the near term. Contrary to the conventional venture capitalist practice of adding value to the portfolio firm in the post investment phase, we find that,

for social purpose organizations, a social investment fund's value-add services do not determine their expected returns, whether they are financial, social or environmental. On the other hand, pre-investment activities like deal screening and evaluation are practised to some extent with impact on expected returns. Specifically, goal congruence, which is being evaluated on in the deal screening phase, is found to positively and significantly influence all three returns: financial, social and environmental returns. In the deal evaluation phase, evaluation processes in due diligence are associated with higher than expected financial returns only. Due diligence activities have no significant impact on expected social or environmental returns.

Based on the findings of this exploratory study, we hypothesize that at this stage of the development of the venture philanthropy sector, which is early days, venture capital investing principles are practised, not to the full extent, but in part, by social investment funds for investments in social purpose organizations. We also hypothesize that the long investment horizon which differentiates social investment funds from traditional venture capital funds explains differences in fund performances.

Notwithstanding, we highlight some limitations of this study. These are inherent in the testing of perceptions and performance which necessarily relied on the subjective assessments of social investment fund managers. In order to minimize related problems, the scales used were either previously validated or formed according to prior research and the variables were validated with other data sources.

Also, although the unit of analysis used in this research is the social investment fund, the survey was sent to individual fund managers within the fund and thus performance expectations and fund attributes could differ from individual perceptions. The survey was addressed to high-level management personnel who were expected to have an acute sense of fund performance and was framed such that respondents were asked to answer from a fund level's perspective. However, it might still not be a perfect reflection of the fund's attitudes and perspectives due to certain individual biases.

Lastly, this study's exploration of the relevance of venture capital principles for venture philanthropy and social investment funds is part of a search for a social investment theory. Exploratory interviews also highlighted the fact that most social purpose organizations did not have required business plans or organizational structures in place, and if they were forced to produce these documents, it could put them off looking for funding. This results in a potential loss of positive investment outcomes. Social investment fund managers need cognizance of the early days of the life cycle of venture philanthropy to grow the sector.

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