INDIAN VENTURE CAPITALISTS (VCs) INVESTMENT EVALUATION CRITERIA

Dr. A.K. Mishra*

Indian Institute of Management, Prabandh Nagar,

Off Sitapur Road,

Lucknow, INDIA

e-mail: mishra@iiml.ac.in

Abstract

The Venture capital (VC) industry in India is of recent origin. However, the average investment value of each deal in India have grown from $3.85 million in 2000 to $7.89 million in 2001.These developments together with the recent steps taken by government to promote venture capitalism in India provide an opportunity for an examination of venture capital industry in India.

This paper analyses the validity of venture evaluation model in India by directly comparing the relative importance of evaluation criteria on the funding decision with the relative importance to factors influencing venture's empirical performance. In the light of the differences in investment opportunities around India, and the nature of industrial development in South East Asia in general, the author anticipated that the investment criteria employed by Venture Capital Firms (VCs) in India would differ. A questionnaire was administered to venture capitalists (regular members of Indian Venture Capital Association) to determine the criteria they use to decide on funding new ventures. The response rate was 100%. A list of forty two criteria was developed on previously developed lists. The criteria fell into six groups: the entrepreneur's personality, the entrepreneur's experience, characteristics of the product or service, characteristics of the market, financial consideration and characteristics of venture management team. Answers were given on a four point rating scales. The results reveal that criteria adopted by Indian VCs are different from those adopted by VCs in other countries including US. The results also confirm that the entrepreneur's personality and experience are seen as being primary indicators of the venture's potential.

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* Associate Professor, Finance & Accounting Group, IIM, Lucknow

INTRODUCTION

In an increasingly knowledge-intensive economy, the importance of venture capital[1] and private equity[2] for the funding of new high-growth potential firms is widely accepted. Venture capital represents one solution to financing the high risk, potentially high-reward projects [Gompers and Lerner 2002]. Positive relationship has been found between institutional investment, size of firm and the presence of venture capital funding. Venture capital industry plays an important role in technological and economic growth through its direct involvement in the development of wide variety of enterprises (Maier and Walker, 1987; Timmons and Bygrave, 1986). Presence of venture capital encourages efficient capital allocation by seeking out and nurturing high growth entrepreneurial companies in the innovative[3] process and which are frequently refused finance from conventional sources (Chan, 1983; Sahlman, 1990; Ray, 1993). Institutions also tend to invest more in firms that are backed by venture capital funding. (Agrawal, 2003). Some anecdotal evidence appears to support the claim that venture capital also spurs innovation. (see, for instance, the European Commission's *Green Paper on Innovation* [1995]). The experience of US, Taiwan and Israel show that technological innovation and the growth of venture capital markets are closely interrelated [Premus 1985]. In the United States, venture capital-backed companies created 4.3 million new jobs in 2000, and $736 billion in revenues – 7.4% of the GDP. Presently, VC in one form or the other has come to stay in over thirty five countries including Japan, Taiwan, India, South Korea, Singapore, Philippines, Malaysia in Asia, Brazil and Argentina in South America and Kenya and Nigeria in Africa. There are now 36 national venture capital associations.

[1] Kortum/Lerner (2000), for instance, shows that in the US much of the growth in patenting appears to have been spurred by the activities of venture capitalists.

[2] Venture capital refers to investment in young unproven startups while private equity generally refers to investments in mature companies, which may include the provision of financing for expansion, buyout of private and public companies and which involve significant corporate restructuring.

[3] The word 'innovative' is used advisedly here to mean any business project which is based on an novel idea with exceptional growth potential. Such business may or may not be science or technology based. This broad definition of 'innovative' allows the discussion to focus on policy issues in their widest context to include the means of stimulating any high growth business.

CONCEPT OF VENTURE CAPITAL

`Venture Capital (VC)' is the term applied to investments in `new and untried enterprises' that are `lacking a stable record of growth' (Bevis, 1986).[1] The assistance frequently comes from *venture capital firms* whose predominant mission is to finance the founding or early growth of new companies that do not yet have access to the public securities market or to institutional lenders such as banks or insurance companies (Perez 1986; Pratt 1987). One change in the venture capital industry during the past twenty years has been the rise of the limited partnership as the dominant organizational form.[2]

The type of financing may include equity or quasi-equity instruments and sometimes debt- normal or conditional[3] in exchange for ownership for a predetermined time period; related assistance may comprise any type of educational endeavour to professional business consultation and board representation (ACVCC, 1980). In particular, the purchase of convertible securities by the venture capitalist is the predominant form of investments in many countries. (See, e.g., Sahlman (1990) and Gompers (1997). Once venture has reached the stage of profitability the venture capitalist disinvests his own investments through available exit routes (bankruptcy, merger, or an initial public stock offering) and redeploys the resources in new ventures.[4] In fact initial public offerings (IPOs) are now an important exit method employed by venture capitalists worldwide (see Jeng and Wells (2000) and Black and Gilson (1998)).[5] For this reason, venture capitalists

[1] Numerous studies have attempted to define the term venture capital (Guan and Cheong, (1989); Dixon , (1990); Sagari and Guidotti, (1991); and Pandey, (1995)). There are probably almost as many definitions of VC as there are VC firms. However, in simple words, venture capital can be defined as equity or equity-linked investments in young, privately held companies, where the investor is a financial intermediary who is typically actively as a director, an advisor, or even a manager of the firm.

[2] The rise of the limited partnership also allows us to accurately track venture capital fundraising. Venture capital limited partnerships raise a pre-specified amount of money to be invested.

[3] Debt is repayable on a certain date; it bears interest and tends (by comparison with equity) to be passive. Compared to debt type of financing, equity has no specific maturity, bears no contractual rate of return and affords the holder certain rights, which make him an active participant in ownership, management, etc. For more details on the differences between these 2 distinguishing types of financing, see Bovaird, Chris, (1990), Introduction to venture capital finance. In the case of a conditional loan, interest and principal are payable only when the enterprise starts generating sales.

[4] The other major exit route for investors is trade sale (the direct sale of investee company to a third party).

[5] See Barry, Muscarella, Peavy and Vetsuypens (1990) and Lin and Smith (1998) for the role of venture capitalists during IPOs.

are only temporary investors and usually are members of the firm's board of directors only until the investment is liquidated.[1]

Venture capitalist's participation is far more extensive and individual than that of a traditional banker. While the latter serves as the "finished intermediary," the venture capitalist plays the role of a `resource manager' for business development.[2] In fact, venture capital business demands skills, attitudes and systems very different from those of traditional financial intermediaries. In their role as intermediaries venture capitalists add value and justify their existence:

1. By bringing investors and entrepreneurs together more efficiently than might otherwise happen (Bygrave, 1987). Venture capital funds fill the gap between an entrepreneur's personal resources and funds that may eventually be raised from traditional credit institutions or public stock offerings (Leinbach, 1987). Entrepreneurs give up a percentage of the ownership of their new company, often not more than fifty per cent, in exchange for acquiring capital. As a result, entrepreneurs avoid interest payments and can more quickly achieve profitability. Venture capitalist joins the entrepreneur as a co-promoter in projects and shares the risks & rewards of the enterprise with the objective of long-term capital appreciation (Shilson, 1984). The common form of compensation is an annual management fee based on capital committed and a portion of carried interest.[3] In fact, Poterba (1989) argues that it is possible that reductions in the capital gains tax rates have a first-order effect on the demand for venture capital as more people are induced to become entrepreneurs and better projects are brought to market.[4] Different degrees of risks, different stages of

[1] This is not always true. Arthur Rock, the lead venture capitalist in funding Intel, remained on the Intel Board of Directors for two decades. Donald Valentine, the lead venture capitalist in funding Cisco, continues on the board fully a decade after it went public.

[2] Barry, Muscarella, Peavy and Vetsuypens (1990) provide an excellent discussion of the role that venture capital firms play in the creation of new businesses.

[3] Carried interest refers to the profits or investment gains realized from the investments made by the fund. The venture capitalist's share of carried interest is disproportionate to the percentage of capital invested since the venture capitalist usually invests only 1% of the capital but receives 20% of the gains as a carried interest. See Sahlman (1990) and Gompers and Lerner(1994).

[4] Anand (1996) examines the effects of capital gains tax rates on investment in the communications industry. He examines investments by venture capital firms into private communication companies and finds that the level and composition of investment appears to be affected negatively by increases in the

investee maturity[1] and consequently, a different degree of post-investment active involvement by the venture capitalist are characteristics of these various investments (Dixon, 1990).

2. By making investment decisions which are superior to those the limited partners could make on their own (Sandberg, 1987). Venture capital in this sense is not solely an injection of funds into a new firm, it is also an input of the skills needed to set the firm up, design its marketing strategy, organise and manage it (Robots, 1983). A number of papers describe the specialisation of venture capitalists at a particular stage of development[2] or in particular industries (Sahlman, (1990), Ruhnka & Young, (1987, 1991)). The past ten years have also seen explosion in the incidence of Management Buy-outs (MBOs) worldwide.[3] By specialising venture capitalists can better understand the industry in which the firm operates and its technology. They can better control the business risk associated with early stage investing by remaining in close contact with the venture (Barney, 1989). Further, such specialisation aids in the

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capital gains tax rate. The author's ability to draw conclusions, however, is limited by the fact that he looks only at one industry. Investments in one industry may be affected by myriad other factors, including technology shifts, tastes, or other investment opportunities. Examining the impact of capital gains tax rates on the quantity of venture capital raised appears to be a much more satisfactory way to address the issue.

[1] Sahlman (1990) describes the stages of company's development at which venture capital might be invested. See Table 2 on p. 479 of Sahlman (1990) for a description of these.

[2] The investments made by venture capital firms may be categorized by the stage at which financing is provided:

- *Seed financing*-usually involves a small amount of capital provided to an inventor or entrepreneur to prove a concept.
- *Startup financing*-provides funds to companies for use in product development and initial marketing.
- *Other early Stage financing*-provides funds to companies that have exhausted their initial capital and need funds to initiate commercial manufacturing and sales.
- *Expansion financing*-includes working capital for the initial expansion of a company or for major growth expansion, and financing for a company expecting to go public within six months to a year.
- *Leveraged buyout financing*-includes funds to acquire a product line or business from either a public or private company, utilizing a significant amount of debt and little or no equity.
- *Acquisition financing*-provides financing to obtain control, possession or ownership of a private portfolio company.

The first three may be referred to as "early stage financing" and the remaining three as "later stage financing."

[3] A management buyout (MBO) involves the purchase of an independent business or subsidiary from the owners in which the incumbent management purchase a share of the equity (anything from as little as 2 per cent or 3 per cent to 100 per cent, according to the size of the deal) and continue to mange the business post-acquisition. Venture capitalists and other investors would purchase the rest of the equity. In large deals, it is also likely that the funding is highly leveraged.

monitoring process (Barry, Muscarella, Peavy and Vetsuypens, 1990). Gompers (1995) points out that the fraction of intangible assets affect the level of agency costs and the need for monitoring.[1] While each venture capitalist will have their own investment range, as a guide, venture capitalists invest between $1 million and $10 million (or larger). This is due to the fact that the characteristics of the venture vary by stage of development (Kazanijan and Drazin, (1989), Ruhnka and Young, (1987)) and thus the degree of involvement also differs.

3. By providing non financial assistance to and, thereby improving the risk-return mix associated with the ventures being funded (Gorman and Sahlman, 1986; Timmons, 1987). Once they invest, venture capitalists take an active role in the governance of their portfolio companies[2] by contributing their business experience and industry knowledge gained from helping other young companies (Zider (1998), Barry (1990), Gompers (1995) and Hellman and Puri (2001)). Venture capitalists are typically well connected in the specific industry, they help to recruit key personnel, they negotiate with suppliers and customers, they advise the entrepreneur on strategic decisions, they play a major role in structuring mergers, acquisitions and initial public offerings, and sometimes they are even engaged in the day to day operations of the firm (Florida and Kenney 1988; Gompers 1995).[3] Baker and Gompers (2003) and Frye (2002) also find that the venture capitalists frequently serve on the Board at the time of the IPO. In fact, by participating in scientific breakthroughs and the formation of new companies, venture capitalists catalyze and accelerate technological change.[4] A good

[1] For example, tangible assets can be liquidated in the event of the failure of the venture, allowing the venture capitalist to recover some part of the initial investment. Intangible assets are less easily disposed of and are more difficult to value.

[2] In the venture capital industry, investments made to portfolio (venture) companies are referred to as disbursements, so it is not confused with investments made by investors who provide capital to the venture capital funds.

3 See e.g. Sahlman (1990, p. 508). Gorman and Sahlman (1989) report that on average each venture capitalist is responsible for ten firms, that he visits each firms nineteen times per year and that he spends one hundred hours annually at each firm.

[4] See Barney, Busenitz, Fiet and Moesel (1996) for a review of the effectiveness of the mentoring and strategic assistance provided by venture capital firms to new startup companies.

venture capitalist can therefore create substantial wealth not only for the investors, but for the economy as well.[1]

VENTURE CAPITAL IN INDIA

Arrival of venture capital in Indian capital market, though belated, is a welcome development. The concept emerged in India, after realising the difficulties faced by new entrepreneurs with viable projects, to raise funds from the capital market. The formalised Indian venture capital market emerged in late 1980s following a series of measures to establish government sponsored risk capital corporations, capital gains tax concessions for venture capital investments (Mishra, 1996). The guidelines on venture capital were issued on 18th Nov. 1988. As a result, the number of formal venture capital firms has radically increased from only eleven before 1994 to eighteen by 1998 and forty in 2001.

IMPORTANCE OF INVESTMENT EVALUATION CRITERIA

In recent years investment evaluation criteria[2] for new ventures has received a great deal of attention and has been a well researched subject in many countries (for overview, see Muzyka, Leleux, & Birley, 1996). The funding proposals submitted to venture capitalists often undergo an intense evaluation before a decision[3] is made (Batterson, 1986). A proper investment decision criterion in any venture capital organisation reduces risk of adverse selection. This due-diligence process[4] is an iterative one, where the first step is to

[1] While the venture capital-financed innovation process accelerates the technological change, the pressure to generate investment returns may sometimes cause venture capital firms to rush portfolio companies into an initial public offering when the business has not been adequately developed. In the late 1990s, when the availability of funding was at an all-time high, venture capital firms duplicated one another's investments, even when the potential market could only support one or two companies. This "venture capital myopia" phenomenon was most evident during the height of the Internet bubble (Gompers and Lerner, 2001).

[2] The evaluation or selection criteria are the factors considered in the initial screening of an application and later appraisal stages.

[3] The decision making process incorporates the initial screening and evaluation of an application for funding and also the subsequent appraisal process, up to the point where a final decision is made by the VCs on whether to reject or accept the proposition; the process also includes confirmation that the terms of the proposed deal are acceptable to all parties.

[4] Due diligence, involves checking all the information deemed to be "necessary" for an application; the amount of details required will clearly vary between (say) a 5 m and 5,000 deal. It is usually done

assess whether a proposal meets the investment criteria of the venture fund and whether the proposal is viable at first sight (Fried & Hiscrich, 1994; Steier & Greenwood, 1995). The exercise becomes important as the failure rate among new ventures is generally viewed as significantly higher than the average failure rate (Dun and Bradstreet, 1984; Van de Ven, 1980; Shapero, 1981). Studies show that about 53 percent of venture capitalists fund less than 1 per cent of the requests they receive (Maier and Walker, 1987). If satisfied with the firm's potential, venture capitalists can provide funding for various stages of development including the financing of growth and continuing operations (Kuratko and Hodgetts, 1989; Ruhnka and Young, 1987). Researches show that venture capitalists are conspicuously successful at selecting new growth ventures by using appropriate selection criteria (Dorsey, 1979; Bruno & Tyebjee, 1983; Davis and Stetson, 1984; Bygrave and Timmons, 1992).

In India too, the decision to invest in a particular venture is extremely difficult and venture capitalists face a general adverse selection problem in screening investment proposals. Little, however, is known about the criteria employed by venture capitalists in India. While the Indian finding (Pandey, 1995) so far, confirm the importance of entrepreneurial characteristics, one limitation in the Indian study is that the numbers of venture capital firms covered have been quite small. Considering that, over the years, the numbers of venture capitalists have increased (40 in 2001), a study at this stage would help overcome the limitation of a small sample, particularly if all the venture capitalists in India were targeted. The intent of this study is to obtain a clearer insight into the venture evaluation criterion used by the venture capital community as represented by the Indian industry.

Significant information asymmetries allow mangers to engage in opportunistic behaviour after an investment is made (Sahlman, 1988). Assessment of managerial capabilities thus becomes extremely important due to the uncertainties inherent in evaluating any new proposal.

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according to set criteria and a checklist. The assessment includes management ability of entrepreneurial team, market opportunity for the entrepreneurial product, growth potential of the company, etc.

This paper focuses on the way the Indian venture capitalist makes the investment decisions.

LITERATURE REVIEW

There is abundant empirical research conducted in developed countries which address the relative investment evaluation criteria taken into account in the screening process for new venture investment proposals. Zopunidis (1994) provides a useful summary of the previous research in this field. The identification of selection criteria has been researched using different methodologies such as simple rating of criteria (perpetual and deal specific responses) (e.g. Wells, 1974; Benoit, 1975; Hoban, 1976; Pointdexter, 1976; Wilson, 1983; Tyebjee and Bruno, 1981, 1984; Bruno and Tyebjee, 1985; MacMillan, Siegel and SubbaNarsimha, 1985, 1987; Goslin and Barge, 1986; Knight, 1986; Dixon, 1991; Hall and Hofer, 1993; Rah, Jung and Lee, 1994)., construct analysis (Fried and Hisrich, 1994), verbal protocols (Zhacharakis and Meyer, 1998), and quantitative compensatory models (Muzyka, Birley,and Leleux, 1996; Shepherd, 1999). Multi methods (case analysis, study of administrative records, published interviews, questionnaire and personal interviews) approach has also been used (Riquelme, 1994) to enhance understanding of investment criteria and also extend it to other aspects of investment process like deal structuring and divestment.

Using the same investment evaluation criteria developed by MacMillan et al (1985) Knight (1988) conducted cross cultural comparison from countries including USA, Canada, Asia-Pacific and Europe. Studies were replicated in other countries; U.K. (Dixon, 1991; Sweeting, 1991) Singapore (Ray, 1991), Japan (Ray and Turpin, 1993), South Korea (Rah et al, 1994), Europe (Riquelme, 1994), India (Pandey 1995), Thailand (Pandey et al, 1995) and Taiwan (Pandey, 1996). Almost without exception in these studies, personality of entrepreneur and his experience are prime focused, a result which is intuitively accepted (Guan and Cheong, 1989; Ray and Turpin, 1993 and Pandey, 1995).

However, all the above researchers used relatively simple, structured mail questionnaires asking venture capitalists to rank and rate the importance of various criteria. *This ex post facto* data gathering technique has been criticised as it failed to capture and convey the richness, subtlety and discernment embodied in the venture capitalists decision process and criteria (Sandberg et al, 1988). None of these studies addressed whether these criteria are actually helpful in distinguishing successful from unsuccessful ventures. Objections were also raised on the assumptions of these studies: the first being that the investment criteria used is the same for all types of investments and secondly the investors have the checklist which consists of a hierarchy of decision criteria which they use in most circumstances. As a consequence, the results could be biased by inaccuracies in the recall ability of venture capitalists, especially trying to differentiate between the criteria that led to success vis-à-vis those that led to failure (Hall and Hofer, 1993). Social judgment theorists suggest that "espoused" decision making process may be a less than accurate reflection of "in use" decision making process (Priem, 1992; Priem and Harrison, 1994). Not all venture capitalists are the same, so the difference between various venture capitalists needs to be explored. These differences may relate between early and later stage investors or other sources of differences including geographic location and firm size (Elango, Fried, Hisrich, and Polonchek, 1994). Hence many researchers have suggested alternative methodologies (Hisrich, 1990; Hall and Hofer (1993); Fried and Hisrich, 1994). Fried and Hisrich (1994) used detailed analysis of the process adopted by venture capitalists in specific cases covering the full range of investment stages. By interviewing eighteen venture capitalists they concluded that none of the venture capitalists use various explicit investment criteria suggested by MacMillan *et al* (1985). They tried to develop fifteen generic investment criteria across three broad categories (see Appendix 1) that all venture capitalists use. The Fried and Hisrich model suggest a two stage screening process by breaking evaluation into two stages, without the separate pricing stage used by Tyebjee and Bruno (1984). The generic criteria described in Fried and Hisrich are similar to those in MacMillan *et al* (1985), but are more clearly defined and apply to a broader range of venture capitalists.

RESEARCH ISSUES

Past researches have investigated the criteria venture capitalists use to make investments; yet little is known about the roles they play in these ventures. This research tries to overcome the sample size limitation by obtaining a larger and more representative sample of the venture capital funds in India and validation of the model on this large sample. The primary propose of this study was to address the need for further information on venture capital decision criteria in India and to attempt to identify national differences. Thus the research aimed at:

- Exploring the key financial criteria used in Indian venture capitalists in evaluating potential investments as per the studies undertaken in the past (Pandey, 1995), and
- To test other new criterias as suggested by Fried (1994).

At the outset, we hypothesized that, given the development of formalised venture capital funds in India following the developments in the United States, it was likely that the criteria applied by venture capitalists in the United States, as reported in the literatures, would be similar to the criteria applied in India.

RESEARCH DESIGN

Sample Selection

Since for this purpose no public data sources were available, researcher had to collect the necessary data first. Full survey was conducted by firstly identifying venture capitalists in different regions of India. The 2001 Indian Venture Capital Association Year Book (Thomson Venture Economics, 2001), a comprehensive guide to Indian venture capital industry was used to identify potential firms and participants. Indian venture capital industry consists of 40 venture capital firms with a total of $ 907.58 million investments in 101 companies (IVCA, 2001). Firms listed in report are located throughout India and compete in diverse set of industries with preferred investment in seed, start up, later stage and turnaround financing. They range in age from one year since founding to over ten

years. These were considered as the sampling frame of venture capitalists in India. The senior executives of each firm in the sampling plan were targeted for this study.

Analytical Model

The primary issue when designing the study was the choice of the methodology. Since many firms seeking venture capital as well as those in this study were new (no historical operating data), they could not be subject to standard credit or loan analysis. Instead, venture capitalists have to rely on subjective assessment based on a set of multi-dimensional and often intangible criteria. Further, venture capital firms in India usually have either a fixed format or guidelines on how to present a proposal and the information they are looking for. Therefore, the methodology similar to that used by Macmillan et al. (1985) was considered suitable for the study. Two methods of data collection were used.

1. In order to empirically study the above issues, a draft structured mail questionnaire was developed and pre-tested with venture capitalists. As this paper is concerned with the general policies adopted by venture capitalists an organisation-wide response was sought, with the covering letter to senior executives specifically asking respondents to report institution's perceptions rather than individual approaches.[1]

2. The questionnaire method of investigation was supplemented by personal discussion and interview with senior executives of VCFs about the investment process used on their most recent investments. The data collected for this study thus includes questionnaire responses and interviews from Indian venture capitalists. However, the two methods of data collection were not significantly different; consequently the two groups of responses were treated as one.

The Criteria

[1] The questionnaire was sent directly to the chief executive officers of the VCs, as it was expected that these individuals would be the most knowledgeable about their company's investment criteria and strategies.

The primary criteria similar to that used by MacMillan et al. (1985) were considered suitable for the study as already discussed above. Hence, the questionnaire for investment evaluation was modified to incorporate some factors found in the study on India (Pandey, 1995) and those found by Tyebjee and Bruno (1984) and others. As can be seen from the questionnaire, the survey asked for ratings of several groups of criteria: 1) The entrepreneur's personality, 2) The entrepreneur's experience, 3) Characteristics of the product, 4) Characteristics of market, 5) Financial consideration, and 6) Characteristics of venture management team. The criteria were ranked on a four point Likert-like scales used by MacMillan *et al*:

1	Irrelevant	Not a factor in the decision making process
2	Desirable	A factor which improves the likelihood of the investment
3	Important	A factor which must be present in order for an investment to take place, unless other factors specifically compensate for its absence
4	Essential	A factor which must be present under any circumstances in order for an investment to take place.

Further, the first phase evaluation as suggested by Fried (1994) was incorporated to overcome the limitations of MacMillan et al. (1985) model. This gives us further insight on evaluation exercise done by Indian venture capitalists after proposals pass through the generic screening.

Survey Method.

Questionnaires were sent to all venture capital firms (regular members of Indian venture capital association) over the period 2002-2003. In order to increase the participation rates a pre-paid back envelope was enclosed along with the covering letter and questionnaire. To ensure that respondents treated the research instruments with appropriate seriousness and provided accurate answers, the author in this survey followed up on each VC in the

sample with telephone calls. Out of forty, eleven venture capitalists responded within four weeks. After four weeks second round was initiated with letters to non responding venture capital firms. We ended up in overall response rate of 100% indicating a very high response rate.

SURVEY RESULTS & IMPLICATIONS

Analysis of Results

Chan (1983) and Sahlman (1990) both argue that VCs play a major role by servicing as producers of information. This study supports this view. The VC operates in a market with imperfect information and expends a great deal of effort collecting information, usually at less cost than investors would incur gathering the information directly. This research yields two major results. The first is the traditional evaluation criteria used by MacMillan et al. (1985) which was modified to incorporate some factors found in the study on India (Pandey, 1995) and those found by Tyebjee and Bruno (1984) and others (Table 1). Findings from Pandey (1995) in India and Knight (1994) in United States, Europe, Asia-Pacific and Canada have been incorporated for the purpose of comparison (Table 2). Table 3 ranks the top ten investment evaluation criteria used by Indian venture capitalists. The second result (Table 4) is a modified set of investment criteria and activities as suggested by Fried (1994) that reflect the unique economic condition and operating environment in India. Transcripts of the interviews were used to fit each case into the Fried and Hiscrich model (1994).[1] In this study, few VCs even consulted with their investors before making an investment. Thus VC does not merely serve as an information producing agent but it is also a decision making agent.

From a review of tables, one can make the following observations:

The Entrepreneur Personality

[1] See Appendix 1 for generic investment criteria identified by Fried and Hiscrich (1994)

Before building a major enterprise, often from scratch, a venture capitalist performs serious soul searching, to be sure that entrepreneurs have certain key characteristics needed to thrive in the toughest jungle of the business world. Experienced venture capitalists say that they prefer a grade A entrepreneur with a grade B business idea, to a grade B entrepreneur with a grade A idea (Mishra, 1996). In fact, Ronstadt (1988) reports that venture capitalists draw on a pool of experienced entrepreneurs, recycling their skills by recruiting them to mange ventures. Some of the capabilities important for entrepreneurial success are drive and energy level, self confidence, setting challenging but realistic goals, long term involvement, using money as performance measure, persistent problem solving, learning from failure, using criticism, taking imitative and seeking personal responsibility, making good use of resources and competing against self imposed standards (Tunmons and John, 1973).

Indian venture capitalists, too place considerable emphasis on the entrepreneur's personality. Integrity, urge to grow and long term vision is the top three investment criteria (Table 3). On the other hand, venture capitalists in general claimed that they were not much concerned with whether the entrepreneur is amenable to suggestion and criticism. If we investigate further from Table 4, great reliance is placed on personal references in conducting due diligence. In both the US & India, greatest reliance was placed on personal references in conducting due diligence. In about 97% of cases venture capitalists contact entrepreneur's former business associates to investigate integrity, attention to deal and urge to grow. They also contact bankers (94% of cases) and solicit opinion of managers of entrepreneur's other portfolio companies (92% of cases) for their commitment towards the deal. However, as expected they do not make significant use of independent advisors and accountants as prevalent in more developed US market.

The Entrepreneur's experience

It is important to recognize the assets and liabilities of entrepreneur's past experience (Starr and Bygrave, 1991, 1992; Starr, Bygrave and Tercanil, 1993). Venture Capitalists considering start ups may place great reliance on evidence concerning an entrepreneur's

track record as a means of gauging the likelihood that performance will be delivered (MacMillan et al., 1987), notwithstanding evidence that previous experience carries liabilities as well as assets experience (Starr and Bygrave, 1991) and that is typically difficult to identify an attractive venture second time around (Wright et al., 1997). A variety of entrepreneurial and functional experience in previous ventures, including prior failure, may be an indicator of better performance (Vesper, 1980; Stuart and Abetti, 1990).

Since the mean of all factors regarding the entrepreneur's personality is above 3 (Table1), it indicates the relevance of the above stated factor from the point of view of venture capitalists. There was high consensus that the key experience requirement was a thorough familiarity with the target market. Almost as important was demonstrated leadership capability in the past. Of least concern was the need of the entrepreneur's track record relevant to venture. This particular attention of past experience in the context of screening is the potential reduction in adverse selection problems because of the information contained in the past and potentially similar experience. Where such experience relates directly to entrepreneurial activity, it will of particular value.

Characteristics of the Product or Services

This is the pivotal issue on whether or not a specific venture capital fund chooses to invest. The product should fill a real need; it should be unique (to differentiate it from competitors); and it should be defensible so that others can't copy it easily. The most recurrent associations entertained by venture capitalists in terms of product are: (a) a clear competitive advantage (represented by a patent, a competitive cost, a technologically advanced product, and a market ready to acquire the product); and (b) the existence of a working prototype, which fills a need not satisfied by others and which contains the seed for new products. The venture capitalists should ensure that the proposed product long term competitive advantage due to its unusual features, innovative technology, cost

effectiveness, satisfaction of customer's demand, risks involved and innovative skills of the entrepreneur to continuously upgrade the product.

In contrast to the previous study (Pandey, 1995) emphasis has shifted on the technology of product, proprietary or otherwise protected product and its uniqueness, as evident from their relatively higher mean values. The most important product characteristic appears to be proprietary or otherwise protected product followed by the need of the product to be "high tech". This may be due to the current boom in IT industry in India and government's emphasis towards technology to be placed in priority zone. IVCA (1998) statistics show that a large percentage of venture capital has been deployed in emerging hi-tech areas in the past.

Characteristics of Market

The market assessment has to do with any elements external to the firm in the marketplace (Porter 1985). In examining the performance of the investee companies, MacMillan et al. (1987) found the most important factors for success to be demonstrated is the market acceptance of the product and insulation against competitive attack. As a rule venture capitalists will not invest in a business if there is no clear market for the product at the time of investment however technically advanced the product may be. Venture capitalists in due diligence proceedings judge the potential size of the market for the company's product/service and its long term growth prospects by determining market size, its potential, actual customers and competitive products. This is done by examining the marketing plan of the proposed venture and taking the help of universal best informed person who has had the direct experience with the particular subject and is, in fact, an expert.

For Indian venture capitalists the critical market requirement is a high growth rate, market accessibility and low level of competition. High market growth rate factor in fact has featured more strongly in the present study (number 2 in the ten most frequently rated essential criteria (see Table 3)). This is in contrast to Pandey's (1995) findings were all

other characteristics in this category were considered to be very low priority. Globalisation and Liberalisation has in-fact made the Indian market more challenging. Evidence suggests that formal venture capitalists in developed markets place considerable more emphasis on market risk than agency risk since they can deal with the latter through various screening, contractual and monitoring mechanisms (Fiet, 1995). Weak customer demand for a product or service (Porter, 1980) causes sellers to offer concessions that increase the risk of market losses.

Financial Consideration

Venture capitalists place great emphasis on financial information, especially projections, in their assessment of potential investees (Manigart et al., 1997). They expect to take large risks and also expects large in form of capital gains, at a substantial capital profit, rather than through steady dividend or interest yield (Wilson, 1986). In short, the venture capitalist will want a healthy ROI, in the 25-40% range, compounded annually.

Venture capitalists in India give considerable importance to liquidity, return and exit options. The mean values of five considerations are higher than 3 which are sufficient to provide rich description of the investment behaviour of venture capitalists. Maximum weight age is accorded to liquidity of investments and expected return of 100% over five years. Of least concern- generally considered irrelevant – was whether or not venture capitalists will participate in later round of investment. In general, personality and experience concerns dominate the financial criteria, which in turn are regarded as more important than product or market criteria.

Characteristics of Venture Management Team

There is a well known saying within the venture capital industry that three most important things in assessing whether to back a project are management, management and management. Management of client's business is the key to its success or failure and most efforts should be centred on assessing the key person or people of the management

team. Even if the company has a good product or a first rate marketing strategy, a venture capitalist should not back the company, unless it has impressive management team or has access to the management talent from external sources. The current literature on venture capitalists decision making suggests that management team is important and often ranked as the most important criterion (Dixon, (1991); Hall and Hofer, (1993); MacMillan et al, (1985, 1987); Tyebjee and Bruno, (1981, 1984)), a result which is intuitively acceptable. A successful management team, in the venture capitalists' mental model, should have these features: (a) personal commitment represented by a financial stake in the business, job security sacrifices, commercial ambition, and the will to become successful; (b) experience in marketing, sales, production, and finance that each team member brings to the business, and their knowledge and skills that are complementary (that is, a balanced management team); and (c) personality traits such as determination, honesty, capacity to listen to advice, capacity to get along with the venture capitalist and with each other.

Indian venture capitalists rely too much on the characteristics of venture management team. Balanced team is considered as critical followed by financial and technical skills. Marketing skills are not treated critical since venture capitalists are closely involved in developing the market along with the entrepreneurs to maximize their post investment returns.

While this study confirms Ray's (1991) finding that entrepreneur's staying power is amongst top ten important criteria for investor's confidence, Table 5 suggests many differences with venture capital industries of other countries. The results reveal that investment evaluation criteria adopted by Indian venture capitalists are different from those adopted by VCs in other countries including US. This is because nature of industry varies from country to country (Bygrave and Timmons, 1992) and is also affected by geographic location and firm size (Elango, et al., 1994). Venture capitalists in India rely significantly more heavily upon their own market evaluation. Their significantly greater emphasis on obtaining independent market reports contrasts with lower reliance on accounting reports already noted. This suggests, as might be expected, a greater concern

with the need to establish the existence of viable market in India, rather than the current financial situation of the company.

IMPLICATIONS FOR RESEARCH & PRACTICE

There is evidence that venture capitalists are not total rational decision makers (Sahlman & Stevenson, 1985). However, despite the obvious self-report limitations of this study and the problems of bias introduced by the survey methodology itself, there are several notable results from this study.

First the analysis identified two criteria that were not heavily weighed by venture capitalists in previous study but which were the only consistent predictors across several performance criteria. These were high market growth rate and integrity. Those criteria, which were highly weighted in the earlier study, were not good predictors – not because they were of no value but because the venture capitalists had already applied them to weed out undesirable ventures.

Secondly, it was found that that VCs in the sample had definite ideas about where to invest and in what types of firms. The difference in investment preference across countries may be explained by the environment in which the VCs operate. The venture selection was thus based not only on the venture related criteria, such as the entrepreneur, the product or the market but also on the predetermined preferences or strategies of VCs which guide their search for new ventures.

In conclusion, this study has provided a glimpse inside the partially explored world of venture development in the VC-funded environment. It suggests that both sides recognise a variety of important roles for VCs in the ventures, and it identifies key variables influencing the magnitude of the importance. Yet, the value added effect can only be inferred from this study. The key remaining research challenge is to explore the performance implications of the involvement of VCs in the venture building process.

TABLE 1: Investment Evaluation Criteria and Results

Evaluation Criteria			Indian studies in			
			1995		2003 (This study)	
			Mean	Frequency	Mean	Frequency
I THE ENTREPRENEUR PERSONALITY						
	1	Integrity	3.78	7	3.96	16
	2	Capable of sustained intense effort	3.11	3	3.62	7
	3	Critical competence vis-à-vis venture	3.22	4	3.24	9
	4	Ability to evaluate & react to risk	3.22	4	3.41	9
	5	Long term vision	3.56	5	3.74	12
	6	Attention to detail	2.78	2	3.66	5
	7	Urge to grow	3.56	7	3.70	16
	8	Commercial orientation	3.33	5	3.37	12
	9	Amenable to suggestions and criticism	2.56	1	3.11	6
	10	Articulate in discussing venture	2.22	1	3.24	7
	11	Compatible personality	2.00	0	3.41	8
II THE ENTREPRENEUR'S EXPERIENCE						
	12	Familiarity with target market	3.22	3	3.66	7
	13	Demonstrated leadership ability in past	2.78	2	3.41	6
	14	Track record relevant to venture	2.67	2	2.90	5
	15	Referred by trustworthy source	1.67	0	3.07	3
	16	Familiarity with entrepreneur's reputation	1.78	0	3.16	4
	17	Competes against self imposed standards	2.89	2	3.16	5
	18	Well thought-out strategy to remain ahead of competition	3.33	5	3.33	12
III CHARACTERISTICS OF THE PRODUCT OR SERVICE						
	19	High-tech product	1.67	0	3.20	9
	20	Proprietary or otherwise protected product	2.22	2	3.24	5
	21	Uniqueness of the product	3.11	3	3.16	7
	22	Product developed to the point of a functioning prototype	3.11	3	2.61	7
	23	Demonstrated market acceptance of product	2.22	1	2.78	2
IV CHARACTERISTICS OF THE MARKET						
	24	High market growth rate	3..33	4	3.91	9
	25	Little threat of competition during the first three years	2.22	0	3.45	8
	26	Easy market acceptability	2.11	1	3.41	2
	27	Market stimulated by the venture	1.78	0	3.24	7
	28	Large size of market	2.00	0	3.37	8
	29	Product in market familiar to VCF	1.78	1	2.94	2
	30	Ability to create a new market	2.00	1	3.20	2
V FINANCIAL CONSIDERATION						
	31	Expected return equal to at least 10 times the investment in 5 - 10 years	1.67	1	1.00	2
	32	Expected return equal to at least 10 times the investment in last 5 years	1.78	0	1.00	0
	33	Expected return over 25% in 5 years	2.67	5	3.16	12
	34	Expected return over 100% in 5 years	1.89	2	3.45	5
	35	Venture can be easily made liquid (by going public or acquisition etc)	3.33	5	3.45	12
	36	Subsequent investment not expected by VCF	1.00	0	2.00	5
	37	VCF will not participate in later rounds of investment	1.00	0	2.00	5
VI CHARACTERISTICS OF VENTURE MANAGEMENT TEAM						
	38	Technical skills	2.67	1	3.51	17
	39	Managerial skills	3.78	7	3.45	16

	40	Financial skills	2.67	2	3.50	5
	41	Marketing skills	3.22	4	3.07	9
	42	Balanced team	3.11	3	3.63	7

TABLE 2: Investment Evaluation: A Comparative Picture

INVESTMENT CRITERIA			US	Canada	Asia-Pacific	Europe	Indian studies	
							1995	2003
I		**THE ENTREPRENEUR PERSONALITY**						
	1	Capable of sustained intense effort	3.60	3.56	3.74	3.56	3.11	3.62
	2	Ability to evaluate & react to risk	3.34	3.31	3.45	3.57	3.22	3.41
	3	Articulate in discussing venture	3.11	2.74	2.77	2.77	2.22	3.24
	4	Attention to detail	2.82	2.68	2.77	2.60	2.78	3.66
	5	Compatible personality	2.09	1.99	2.19	2.10	2.00	3.41
		THE ENTREPRENEUR'S EXPERIENCE						
II	6	Familiarity with target market	3.58	3.68	3.57	3.54	3.22	3.66
	7	Demonstrated leadership ability in past	3.41	3.01	2.98	3.18	2.78	3.41
	8	Track record relevant to venture	3.24	2.68	2.92	3.03	2.67	2.90
	9	Referred by trustworthy source	2.03	2.10	2.22	2.01	1.67	3.07
	10	Familiarity with entrepreneur's reputation	1.83	1.50	1.72	1.55	1.78	3.16
III		**CHARACTERISTICS OF THE PRODUCT OR SERVICE**						
	11	Proprietory or otherwise protected product	3.11	2.28	2.64	2.74	2.22	3.24
	12	Demonstrated market acceptance of product	2.45	2.66	2.81	2.85	2.22	2.78
	13	Product developed to the point of a functioning prototype	2.38	3.05	2.92	2.97	3.11	2.61
	14	High-tech product	2.30	1.25	1.42	1.45	1.67	3.20
IV		**CHARACTERISTICS OF THE MARKET**						
	15	High market growth rate	3.34	2.86	3.15	3.00	3.33	3.91
	16	Market stimulated by the venture	2.43	2.37	2.52	2.36	1.78	3.24
	17	Product in market familiar to VCF	2.36	1.81	2.10	2.14	1.78	2.94
	18	Little threat of competition during the first three years	2.37	2.40	2.42	2.23	2.22	3.45
	19	Ability to create a new market	1.82	1.63	2.17	1.75	2.00	3.20
V		**FINACIAL CONSIDERATION**						
	20	Expected return equal to at least 10 times the investment in 5 - 10 years	3.42	2.56	2.94	2.86	1.67	1.00
	21	Venture can be easily made liquid (by going public or acquisition etc)	3.17	2.39	2.67	2.72	3.33	3.45
	22	Expected return equal to at least 10 times the investment in last 5 years	2.34	1.99	2.12	2.10	1.78	1.00
	23	Subsequent investment not expected by VCF	1.34	1.92	1.72	1.57	1.00	2.00
	24	VCF will not participate in later rounds of investment	1.20	1.56	1.24	1.40	1.00	2.00

TABLE 3: Top Ten Evaluation Activities Criteria by Indian Venture Capitalists

Criteria	Mean	Frequency
Integrity	3.96	16
High market growth rate	3.91	9
Long term vision	3.74	12
Urge to grow	3.70	16
Attention to detail	3.66	5
Familiarity with target market	3.66	7
Balanced team	3.63	7
Capable of sustained intense effort	3.62	7
Technical skills	3.51	17
Financial skills	3.50	5

TABLE 4: Evaluation Activities Carried Out by Venture Capitalists

ACTIVITY	HOW OFTEN (%)	RANK	HOW OFTEN (%)	RANK
	U.S.		INDIA	
Interview all members of management team	100	1	96	2
Tour facilities	100	1	82	9
Contact entrepreneur's former business associates	96	2	97	1
Contact existing outside investors	96	2	75	11
Contact current customers	93	3	68	12
Contact potential customers	90	4	56	15
Investigate market value of comparable companies	86	5	89	7
Have informal discussion with experts about the product	84	6	82	9
In-depth review of pro forma financials prepared by company	84	6	93	4
Contact competitors	71	7	66	13
Contact bankers	62	8	94	3
Solicit opinion of managers of your other portfolio companies	56	9	92	5
Contact suppliers	53	10	86	8
Solicit the opinion of other venture capital firms	52	11	55	16
Contact accountant	47	12	59	14
Contact attorney	44	13	39	18
Contact in-depth library research	40	14	52	17
Secure formal technical study of product	36	15	79	10
Secure formal market research study	31	16	91	6

TABLE 5: Five Most Frequently Rated Essential Criteria in USA, Singapore, Japan & India

Criteria	USA	SINGAPORE	JAPAN	INDIA	
				1995	2003
Sustained Intense Effort	1	1	2	*	*
Familiar with Target market	2	2	1	*	*
Eavluates and reacts to risk	5	5	3	*	*
Demonstrated leadership	4	2	*	*	*
At least 10 times return in 5-10 years	4	5	*	*	*
High market growth rate	*	2	4	5	2
Creation of a new market	*		5	*	*
Liquid investment	*	*	5	*	*
Integrity	*	*	*	1	1
Managerial skills of venture team	*	*	*	2	*
Functioning prototype	*	*	*	*	*
Urge to grow	*	5	*	3	4
Long term vision	*	*	*	4	3
Commercial orientation	*	*	*	5	*
Attention to deal					5
Asterisk (*) indicates that the factor us not amongst top 5 criteria					

Appendix 1: Generic Investment Criteria Identified in Fried and Hiscrich (1994)

Concept
• Potential for earnings growth
• Brought to market within 2 or 3 years
• Significant competitive advantage
• Reasonable capital requirements
Management
• Personal integrity
• Strong track record
• Realistic
• Ability to identify risk
• Thorough understanding of business
• Flexibility
• Leadership
• General management experience
Returns
• Exit opportunity
• Potential for high rate of return (%)
• Potential for high absolute return (US $)

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