selling one of its divisions. A new trend has been for whole companies to be bought out and subsequently delisted.

**Secondary’s** – The term for the market for interests in venture capital and private equity limited partnerships from the original investors, who are seeking liquidity of their investment before the limited partnership terminates. An original investor might want to sell its stake in a private equity firm for a variety of reasons: it needs liquidity, it has changed investment strategy or focus or it needs to re-balance its portfolio. The main advantage for investors looking at secondaries is that they can invest in private equity funds over a shorter period than they could with primaries.

**Seed Capital** – The provision of very early stage finance to a company with a business venture or idea that has not yet been established. Capital is often provided before venture capitalists become involved. However, a small number of venture capitalists do provide seed capital.

**Strategic Investment** – An investment that a corporation makes in a young company that can bring something of value to the corporation itself. The aim may be to gain access to a particular product or technology that the start-up company is developing, or to support young companies that could become customers for the corporation’s products. In venture capital rounds, strategic investors are sometimes distinguished from venture capitalists and others who invest primarily with the aim of generating a large return on their investment.

**Syndication** – The sharing of deals between two or more investors, normally with one firm serving as the lead investor. Investing together allows venture capitalists to pool resources and share the risk of an investment.

**Turnaround** – Turnaround finance is provided to a company that is experiencing severe financial difficulties. The aim is to provide enough capital to bring a company back from the brink of collapse. Turnaround investments can offer spectacular returns to investors but there are drawbacks: the uncertainty involved means that they are high risk and they take time to implement.

**Venture Capital** - The term given to early-stage investments. There is often confusion surrounding this term. Many people use the term venture capital very loosely and what they actually mean is **private equity**.
CHAPTER-2
REVIEW OF LITERATURE

2.1 Private Equity and Venture Capital Literature Evolution

In this section, a short summary of the private equity literature that has evolved over the past years and the topics that have received special attention from scholars are provided. Research about private equity does not to belong solely to any one single discipline. Studies about private equity have been published in journals in the areas of financing (Journal of Private Equity and Venture Capital, Journal of Finance, Journal of Financial Economics, Journal of Corporate Finance), economics (American Economic Review, Quarterly Journal of Economics), management (Academy of Management Journal, Management Science), entrepreneurship (Journal of Business Venturing), and sociology (American Journal of Sociology), amongst others. A majority of the theoretical work and empirical studies have come from the finance and economic disciplines, as around 60% of PE studies are published in financial or economic journals (Cornelius and Persson, 2006). Among the most cited researchers in the field, finance scholars seem to dominate. Hence, a large number of studies use theoretical perspectives based on neo-classical economics such as agency theory, capital market theory, game theory and signaling as well as more classical supply and demand theories. Another stream of research, however, arrives from the entrepreneurship and management disciplines, typically focusing on the venture capitalists and their portfolio companies. While earlier studies in this stream tended to be of a descriptive and exploratory nature without any strong theoretically foundations, more recent research increasingly applies a variety of theoretical perspectives to the field, including resource-based theory, learning theory, social capital theory, social network analysis, population ecology theory, and institutional theory. Thereby, the theoretical foundations of PE research have evolved and deepened since the 1970s when the first studies in the field were published. Likewise, the sophistication of the methods has increased significantly over the years. While early studies were often based on data collected through rather simplistic mail questionnaires, collection and analysis methods used later on include, for example, conjoint analyses, social network analysis, and advanced multivariate data analysis. Though financial scholars tend to follow quantitative trajectories, other researchers are more heterogeneous in their choices of methods, including the use of qualitative data. The empirical focus has changed to a slight degree, as well. From a situation
where most research was US-centric, the proportion of international studies has increased significantly over the years. During the 1990s, only 29% of PE research was undertaken outside of North America. However, by the early 2000s, 58% of the studies conducted in the field arrived from the rest of the world, predominately from the EU (Cornelius and Persson, 2006). Today, PE research is a multifaceted discipline with topics ranging from the relationships between private equity firms and either their investors or their portfolio companies, their governance and control on several levels, to valuation and performance of portfolio firms and private equity funds, as well as the performance of the industry as a whole.

Timmons and Bygrave (1986) presented one of the first overviews of venture capital investing and of existing research in the field, providing a holistic overview of the professional entrepreneurial financing industry. Following that, Sahlman (1990) published a widely cited paper on the structure and governance of US based VC organizations. In the early 1990s, Bygrave and Timmons (1992) released a popular book, ‘Venture Capital at the Crossroads’, which summarized the key characteristics of venture capital investing. One of the more comprehensive books about private equity was written by Gompers and Lerner (1999b). The book was supplemented in 2001 with a more practitioner-oriented volume (Gompers and Lerner, 2001). A somewhat different type of review was put together by Cornelius and Persson (2006), which offered an extensive bibliometric analysis of studies in venture capital research. More contemporary overviews of studies focusing solely on buyout capital have been presented by Wright et al. (2009) and by Wood and Wright (2009).

During the literature review in the past two years by the researcher it was found that most of the previous research are focused on the private equity firm, or a combination of the PE firm and its portfolio companies. The vast majority of extant PE studies belong to this group. Each group of studies tends to be oriented around a common set of questions. What do private equity firms do, and how are investments selected, governed and exited? Do private equity firms add any non-financial value to their portfolio firms, and if so, what types of value? How do private equity-backed firms perform in relation to non-private equity financed firms? The focus of the earliest private equity studies was to a large extent placed on understanding more about PE firms and their portfolio companies. The research questions were typically oriented around how PE firms make selections, take decisions, work with their investee firms, and finally exit from them.
2.2 Review of Literature

The purpose of the review is to present over arching themes occurring in the PE streams of research with a special focus on topics of particular importance to this thesis, i.e. “A Study of role of PE in the development of innovative and advance technology in the manufacturing and service sector in India”. The present literature review is based on more than 95 published peer reviewed papers, books and recent unpublished studies, whereof only a selected number are being mentioned in the following paragraphs:

Macmillan and Narshima (1985) found that venture capitalists appear to assess ventures systematically in terms of six categories of risk to be managed. These are risk of losing the entire investment, risk of being unable to bail out if necessary, risk of failure to implement the venture idea, competitive risk, risk of management failure and risk of leadership failure. Finally, three clusters of venture capitalists were identified: those who carefully assess the competitive and implementation risks, those who seek easy bail out and those who deliberately keep as many options open as possible.

Bygrave (1987-1988) identified how PE firms interact with other investors. This issue was tested in the empirical context of investment syndication networks. Examples of research questions in these studies were: why do PE firms syndicate, who syndicates with whom, how does a PE firm’s position in a network affect performances or behaviors and what costs are associated with investment syndications.

Fried and Hisrich (1989) found that PE providers assess and evaluate people, teamwork, discipline, strategy, and past performance of investee companies before extending finance.

Richard Florida, Donald F. Smith Jr. (1990) revealed from a two-year study, supported by the U.S. Economic Development Administration, that resulted in a new data base on venture capital supply and investment. The findings of the research concluded that venture capital is not sufficient to stimulate high-technology development. In fact, U.S. venture capital exhibits a strong flow toward established high-technology regions such as Silicon Valley and Route 128. This fact leads to the conclusion that venture
capitalists are proficient in locating high-technology investment opportunities where they exist and that, as such, capital gaps are a reflection of underlying structural weaknesses in an area's technology base. Policymakers should turn their attention away from finance capital programs and return to the basics of building a strong technological infrastructure and integrated industrial base.

Gomper and Lerner (1996, 1999a, 2000) analyzed 140 partnerships (mainly VC) and assigned each fund a series of proxies that measure the probability of opportunistic behavior. In addition, they proxy the demand for VC funding and related these variables to the amount and type of covenants used in a fund's contract with investors. They defined and identified 14 major classes of covenants. They found that investor prominence was an important factor for determining compensation terms. In the US, older and larger private equity organizations were especially sensitive to performance-related compensation factors and thus may demand greater shares of the capital gains than their younger peers. They also revealed that portfolio firm valuation in a financing round was increased when more money was poured into the private equity industry in the year before the deal was closed. They argued that there were a limited number of favorable investments in the private equity industry, giving way to the so-called 'money chasing deals' phenomenon, which had been supported by several other researchers later (Ljungqvist and Richardson, 2003, Hochberg et al 2007, Diller and Kaserer, 2008).

Wang (2001) conducted an empirical study on the PE/VC exit mechanism in Singapore using survey and interview data with the objective to know the exit of venture capital PE/VC) is essential for the growth of the PE/VC industry and to explore the rationale of PE/VCs in choosing a particular mode of exit for their investments. This study presented empirical evidence of the various determinants which affect Singapore venture capitalists exit choices, and explored the local VC investment/exit process. Consistent with other studies, it was found that companies in the family-owned, high-technology industries tend to exit via initial public offering (IPO). In addition, the IPO exit route was positively related to the total amount of venture financing and company total sales. However, the level of equity valuation was shown to be independent of the likelihood that the VC-backed companies will exit via IPO. In contrast to the grandstanding hypothesis, younger VCs do not perform more IPO-exits than their older counterparts. Another noteworthy finding was that the
frequency of financing rounds was independent of the IPO exit. All these results revealed the immaturity of Asia’s capital markets compared with the West.

**Blaydon and Horvath (2002)** in his findings reported that an investor who invests in the same company via two different PE/VC funds receives two different valuations.

**Chen et al (2002)** examined 148 venture capital funds that had been liquidated between 1969 and 2000. They found an average annual return of 9.99%, with the highest annual IRR of 74% and the lowest of -72%.

**Moskowitz & Vissing-Jorgersen (2002)** using data at the household level, claimed to have been the first to provide estimates of the return and risk characteristics of the entire market of nonpublic equity. They found that the majority of household investment in private companies was concentrated in a single, risky, privately held firm in which the household has an active management interest. Despite the risks these investors faced in taking on large amounts of idiosyncratic risk, the returns to private equity were surprisingly low. They found that the average return to private equity is similar to that of public equity, leading them to conclude that the diversified portfolio of public equity seems to offer a more attractive risk-return trade-off than that obtained by the typical entrepreneur. They also attempted to answer the question of why people became entrepreneurs and considered five possible explanations: high entrepreneur risk tolerance, large additional pecuniary benefits, large non pecuniary benefits, a preference for sleekness, over optimism and misperceived risk.

**(Bottazzi and Da Rin, 2002).** found that PE/VC-backed firms do not generally perform better in terms of growth or financial returns than other companies. Research on buyout investments seems to follow the same path as the VC studies, although it had lapsed a few years behind the other field.

**Manigart et al (2002)** inferred that early-stage PE/VC firms require a significantly higher return for an investment than companies focusing on later phases.

**Alexander Ljungqvist, Matthew Richardson (2003)** analyzed the cash flow, return, and risk characteristics of private equity. They documented the draw down and capital return schedules for the typical private equity fund, and showed that it took several years for capital to be invested, and over ten years for capital to be returned to
generate excess returns. They provided several determining factors for these schedules, including existing investment opportunities and competition amongst private equity funds. In terms of performance, they found that private equity generates excess returns on the order of five plus percent per annum relative to the aggregate public equity market. One interpretation of this magnitude was that it represented compensation for holding a 10-year illiquid investment.

Das et al (2003) inferred that a high rate of early-stage investments has a negative impact on the proportion of successful exits. In addition, the geographical origin and focus of a fund seem to impact returns. They also found that European PE funds are considered to generate lower returns than US-based funds.


Ljungqvist and Richardson (2003) analyzed the cash flow data of a single large US private equity investor during the period 1981 to 2001 and concluded that private equity fund investments outperform the S&P 500 by six to eight percent and the NASDAQ Composite Index by roughly three to six percent. They suggested that the over-performance was driven by a potential bias since the sample consisted primarily of mature buyout funds, which generally tend to outperform VC funds.

Ljungqvist & Richardson (2003) With access to proprietary data of 73 private equity funds from a large GP, raised from 1982 to 2001 and found that it took six years for 90 percent of the committed capital to be invested, and that the IRR of the average fund does not turn positive until the eighth year of the fund’s life.

Cumming and Macintosh (2003) found that when venture capitalists (VCs) make a partial, as opposed to a full exit, for the full range of exit vehicles. A full exit for an IPO involves a sale of all of the venture capitalists holdings within one year of the IPO; a partial exit involves sale of only part of the venture capitalists holdings within that period. A full acquisition exit involves the sale of the entire firm for cash; in a partial acquisition exit, the venture capitalist receives (often illiquid) shares in the acquirer firm instead of cash. In the case of a buyback exit (in which the entrepreneur buys out the venture capitalist) or a secondary sale, a partial exit entails a sale of only
part of the venture capitalists holdings. A partial write-off involves a write down of
the investment. They considered the determinants of full and partial venture capital
exits for all five exit vehicles. They also performed a number of comparative
empirical tests on samples of full and partial exits derived from a survey of Canadian
and U.S. venture capital firms. The data offered supported to the central hypothesis
of the paper that the greater the degree of information asymmetry between the selling
VC and the buyer, the greater the likelihood of a partial exit to signal quality. The
data also indicated differences between the U.S. and Canadian venture capital
industries, and highlight the impact of legal and institutional factors on exit strategies
across countries.

**Cumming and Walz (2004)** found that fund size and syndication of PE funds is
positively related to performance but not fund sequence.

**Hsu (2004)** found that better VCs get better deal terms in the form of lower
valuations, for instance when negotiating with startups. He developed a hand-
collected data set of 148 financing offers (both accepted and declined) made to a
group of 51 early-stage high-tech start-ups. In this way, he revealed that a financing
offer from a high-reputation VC was approximately three times more likely to be
accepted by an entrepreneur. As well, it is shown that highly reputable VCs acquire
start-up equity at a 10–14% discount.

**Litvak (2004)** supported the notion when showing that compensation levels may
vary across PE funds depending on the managing firm’s prominence. Taken together,
earlier research showed that the economic relation between LPs and GPs is fairly
standardized. However, in times of high demand, or for a few outstanding GPs, the
compensation terms to fund managers may deviate from industry standards.

**Lerner and Schoar (2004)** revealed that LPs hardly ever interfere in the operation of
a fund, even in cases where they are granted the right to do so (for example by voting
to dissolve a fund). On the other hand, the authors put forward the finding that LPs
require wide-ranging information rights, allowing them to monitor the performance
of funds. The information flows between PE fund managers and their fund investors
after the investors have invested in the fund.
Hege et al (2004) found that private equity/venture capital investments made in the United States generate higher returns than those made in Europe. The authors found differences in contracting behavior that help to partially explain the observed performance gap, but U.S. venture funds investing in Europe do not outperform their European peers.

Neus, Walz (2004) analyzed the disinvestment decision of venture capitalists in the course of the initial public offering (IPO) of their portfolio firms. Due to informational asymmetries, the capital market learns of the project quality only in the period following the IPO. Venture capitalists with high-quality firms face a trade-off between immediately selling their stake in the venture at a price below the true value and having to wait for an additional period until the true value is revealed. The latter strategy, however, entails opportunity costs in the form of forgone investment in another attractive venture. He investigated this trade-off and showed that the dilemma may be resolved via a reputation-acquiring mechanism in a repeated game set-up. In this set-up he explained, for example, the advent of "hot-issue market behavior" involving early disinvestments and a high degree of price uncertainty. Furthermore, he provided a new rationale for under pricing in the course of an IPO and concluded that young venture capitalists may use under pricing as a device for credibly committing themselves to acquiring reputation.

Barnes and Menzies (2005) found that institutional investors who invest in PE funds typically follow comprehensive and structured procedures when identifying and selecting which private equity funds to invest in. Also after an investment into a fund had been made, LPs continue to pursue well-defined processes and decision paths when interacting with fund managers. The authors also found that LPs develop strong informal relationships with the managing GP that fall outside the formal terms of the LP agreement. According to the limited partnership agreement, fund investors are supposed to be rather passive. They also inferred that institutional investors tend to pursue agreements and terms that adhere to standard market terms, and that they are rarely prepared to negotiate terms considered ‘out of market’. That is, contracts are expected to be fairly standardized. They also found that LPs examine broad, and often intangible, indicators of VC firms’ performance reputations in attempts to predict future fund returns.
Cumming et al (2005) found more monitoring, more advice, more legal protection, and the use of convertible securities are associated with higher performance. In addition, the authors also found that less-stringent accounting rules and weak legal systems seem to facilitate overvaluation.

Gomper et al (2005) concluded that PE/VC firms with the most experience in a given industry are prone to increase their investments when the market heats up. The success rate for deals done in a hot market is lower than for deals done in a cold market, although the difference was negligible. The authors also found that the main driver of the success rate of funds with their portfolio companies is specialization.

Kaplan and Schoar (2005) analyzed 746 US-based private equity funds, whereof 78% where VC-based, over the years 1980 through 2001. They found that average fund returns net of fees were slightly less than the S&P 500 index and that fund returns are relatively persistent over time. They found evidence that PE firms’ returns decline when their funds grow abnormally fast, and that top-performing firms’ funds grow less than proportionally. They also inferred that one of the most important determinants of excess returns from private equity investing is related to the management teams’ skills in several dimensions, including their ability to identify beneficial investments, to provide professional support to portfolio companies, or simply to make better deals. They also concluded that the established PE firms are less sensitive to business cycles than are new entrants.

Laine and Torstila (2005) found that larger VC/PE funds have significantly higher rates of successful exits compared to smaller funds, a conclusion supported by Hochberg (2007).

Söderblom and Wiklund (2005) identified factors affecting PE fund performance in all possible areas, ranging from broad macro determinants to rather narrow portfolio firm related factors. The performance factors presented below were structured into three categories: (i) PE funds’ focuses and characteristics, (ii) PE managers’ skills and governance of investments, and (iii) macro factors. The factors related to the first two categories had more or less direct impacts on PE fund returns, while the factors presented in the third category have somewhat more indirect effects.
Mayer et al (2005) found in their research that pension- and insurance-backed PE funds often focus on later stage investments in low technology sectors on a global basis, while bank-sponsored funds prefer domestic VC investments in later phases. The study also suggested that corporate-backed VC firms invest in early stages, preferably in high technology ventures globally rather than domestically, and that governmental investors more often invest in national VC funds.

Schertler (2005) used panel data for investigating VC investments in various European countries. He also found that banks prefer investments in later stages, while L.Ps having additional goals besides direct return driven for their investment activities primarily target investments in young technology firms. In conflict with the findings presented by Mayer et al. (2005) Schertler explored that pension funds and insurance companies show especially high interest in early-stage investments.

Kandel et al (2006) investigated why funds have a finite life. They provided a theoretical framework and empirical evidence for the main inefficiency stemming from such a structure: continuation of bad projects and termination of good projects.

Kaplon and Scholar (2006) found that the performance net of fees depends positively on fund size, fund sequence, having a VC objective, past performance, and public market returns during the investment phase of a fund’s life. They also found, that private equity funds do not significantly outperform public equivalent investments.

Zwart et al (2006) proposed a solution to the problem of achieving and maintaining a desired exposure to private equity. It takes into account the characteristics of existing private equity portfolios to determine the level of new commitments. The authors stated that optimal commitments depend on contemporaneous distributions, uncalled capital from past commitments, and exposure objectives.

Anson, Mark (2007) examined the influence of public stock market returns on private equity portfolios. The author noted a significant lagged pricing effect between the public equity and private equity markets. The study also revealed that private equity managers apply the rule of conservatism in valuing their portfolios.

Driessen et al (2007) in their study offered a comprehensive picture of the risk profile of private equity funds. They compared the risk profile of different types of funds,
evaluated the relative accuracy of different funds’ risk models and investigated whether risk is time varying and nonlinear.

Cressy et al (2007) revealed that portfolio firm performance depends to a significant extent on the backing BO firm’s skills and characteristics. They suggested that the successes of VC-backed firms to a large extent depend on the respective VC firm’s capabilities to add non-financial value. The issue of causality seems, however, often to be bypassed; is better or worse, performance merely an effect of a superior ability to pick winners.

Hochberg et al (2007) found that the cross-sectional differences in returns are closely related to PE firms’ abilities to nurture investments, i.e. to add value to portfolio companies.

Ulfs Axelson Per Stromberg, Michael s Weisbach (2007) presented a model of the financial structure of private equity firms. In the model, the general partner of the firm encounters a sequence of deals over time where the exact quality of each deal cannot be credibly communicated to investors. They showed that the optimal financing arrangement is consistent with a number of characteristics of the private equity industry. First, the firm should be financed by a combination of fund capital raised before deals are encountered and capital that is raised to finance a specific deal. Second, the fund investors' claim on fund cash flow is a combination of debt and levered equity, while the general partner receives a claim similar to the carry contracts received by real-world practitioners. Third, the fund will be set up in a manner similar to that observed in practice, with investments pooled within a fund, decision rights over investments held by the general partner and limits set in partnership agreements on the size of particular investments. Fourth, the model suggests that incentives will lead to overinvestment in good states of the world and underinvestment in bad states, so that the natural industry cycles will be multiplied. Fifth, investments made in recessions will on average outperform investments made in booms.

Nikoskelainen and Wright (2007) found, when studying a set of buyouts, that returns are connected to the management firm’s corporate governance skills. They also inferred that larger BO funds perform better and provide higher investor returns. Likewise, Phalippou and Gottschalg (2009) found that one of the main drivers for private equity fund underperformance is small fund size.
Conroy and Robert (2007) in his article looked at the recent research on private equity returns and used new benchmarks to examine the risk-adjusted returns of investors. They concluded that the attractiveness of private equity as an asset class is overstated.

Müller (2008) found three main functions of information flows between PE funds investor and fund manager i.e. decision support, governance enabling and relationship building. An adjacent area that had also received considerable attention in the literature is the contractual relation between PE fund investors on the one hand and the fund managers on the other.

Diller and Kaserer (2008) showed that PE fund returns are positively correlated with the managing PE firm’s skills, not least their selection capabilities. They also argued as private equity investments are rarely traded on secondary markets or at least the pricing of such transactions is not disclosed, scholars as well as practitioners usually rely on the cash flow history of fund investments and divestments when determining returns. For that purpose, the internal rate of return (IRR) or a public market equivalent (PME) is typically used.

Gompers and Xuan (2008) found that the level of variation in success between the most experienced and the least experienced private equity groups increases in ‘hot’ markets. A much gloomier view of the risk-return characteristics of private equity funds can be found in Phalippou and Gottschalg (2008) article. They advocated that the previous research have overstated the performance of these investments, according to their article. The authors presented a number of reasons why they think this is the case. Their argument was that in past studies performance is driven by inflated accounting valuation of ongoing investments and a bias towards better performing funds in the data. Once this was accounted for, they found that the average net of fees performance of the industry was lower than that of the S&P 500 by 3% a year. Adjusting for risk would lead to underperformance of the order of 6% per year.

Hobohm (2009) analyzed differences in PE fund investment preferences across a large set of international institutional investors. The author found that investment companies, insurance corporations, PE fund of funds, banks and private pension funds invest more often in BO funds than the average LP. On the other hand,
endowments, family offices, public pension funds and (US) government agencies do not overweigh BO investments.

Jenkinson (2009) concluded that private equity’s high degree of leverage in the boom years leading up to the recent bust is a dominant factor in that market’s current precarious state. Valuations had fallen precipitously and are likely to fall farther, with some firms going into default. But many firms will prove robust, and those firms with cash available should be able to find excellent bargains in 2009 and 2010.

Metrick and Yasuda (2009) inferred that one reason why BO funds tend to perform better than VC funds is that the former are more scalable, leading to significantly higher revenue per investment professional. However, there are also contradictory views about optimal PE fund sizes, indicating that too large funds may underperform relative to their smaller peers.

Walske and Zacharakis (2009) showed that nascent VC firms founded by managers having prior venture capital or senior management experience were more likely to raise subsequent funds. Following the reasoning that experience has a strong impact on performance, there is an expectation that the returns from a subsequent fund will be in line with, or better than, the previous fund’s return. This so-called ‘persistence phenomenon’.

Cumming and Walz (2010) claimed that there are systematic biases in the reporting of interim IRRs. The authors argued that experienced PE firms tend to report significantly lower valuations than their younger, especially early-stage and high-technology focused counterparts.

Joanne L. Scillitoea, Alok K. Chakrabartib (2010) examined the role of counseling and networking interactions with incubator management on both beneficial business and technical assistance for new technology-based firms (NTBF). Results of this study suggested that business assistance, in the form of venture learning about buyer preferences, is best enabled through counseling interactions with incubator management. Learning buyer preferences was not enabled through networking interactions. Technical assistance, in the form of venture learning technological know-how skills, is best enabled through networking interactions with incubator management. Learning technological know-how skills was not enabled
through counseling interactions. This study, therefore, highlights the importance and a clearer distinction of how both counseling and networking interactions with incubator management enable the incubation process of new ventures.

**Da Rin and Phalippou (2010)** found that large investors are more popular and thus attain advantageous terms and conditions in negotiations with GPs. Yet another explanation for identified variations in returns is LPs’ different objectives. For example, banks, corporate investors and governmental investors may pursue non-financial goals for their PE fund investment activities, and thus are expected to receive lower returns.

**Hochberg et al (2010)** examined whether U.S. venture capital firms engage in practices designed to increase their bargaining power over entrepreneurs by restricting entry into local VC markets. To begin with, they were able to show that networking can have the effect of reducing entry in the VC market. Second, their results helped to explain evidence from their 2007 paper that better-networked VCs enjoy better performance. Part of the explanation for this may be due to the lower prices VCs pay for investments in more densely networked markets. Third, they shed light on the process of entry in the VC industry. Successful entry appears to involve “joining the club” by offering the incumbents syndication opportunities in one’s home market.

**Gary Gibbons and Heather M. Stone (2011)** described the development of the key duties and obligations that traditional investment advisors have to their clients and discussed the new regulatory obligations and duties that registered PE managers will soon owe to their clients and the SEC.

**Cyril Demaria (2011)** identified that the influence of socially responsible investing (SRI) on large and listed companies is limited. Private equity could be successful but methods have to be adapted to avoid the costs associated to SRI post-investment monitoring. Criteria have been applied in the investment screening process, notably in minority-related private equity investments. Despite its promising endeavor, minority-related investing is still not part of mainstream private equity, because the minority related private equity risk–return profile is sub-optimal. The roots of the underperformance lie in the definition of intervention of private equity fund managers focusing on different opportunities. The author suggested that these private equity
fund managers redefine the scope of their intervention from geographical or ethnical criteria to underprivileged people. Private equity fund managers will need to redefine the way they create value for their portfolio companies. The extra work would result in risk reduction and benefit usual private equity investors.

**TR Annamalai, A Deshmukh (2011)** inferred from their study that most VC/PE investments were in late stage financing and took place many years after the incorporation of the investee firm. The industry was also characterized by the short duration of the investments. The type of exit was well predicted by the type of industry, financing stage, region of investment, and type of VC/PE fund.

**Ulrich Hege and Alessandro Nuti (2011)** analyzed the performance of the private equity secondary’s market during the recent financial crisis. They showed that the effective market liquidity contracted severely in early 2009 to only a fraction of earlier volume. They suggested a behavioral explanation for the puzzling phenomenon of the valuation gap, the widening gulf between seller and buyer valuations based on framing and loss aversion. They argued that the particular form of illiquidity in the secondary’s market can be best understood as the cumulative effect of these behavioral effects and accounting-based elements. The article documented the quick recovery of the secondary’s market that showed no signs of more protracted turbulences than the stock market. The available evidence indicated that the liquidity and the relative resilience of the secondary’s market were efficient.

**Nathalie Gresch and Rico von Wyss (2011)** measured the performance of private equity funds of funds versus direct fund investments based on a comprehensive sample of 1,641 funds and revealed that on a risk-adjusted basis, funds of funds outperform the aggregated direct funds. When separated into categories such as buyout, venture, and fund of funds, buyout funds exhibit the most attractive risk–return profile.

**Steven J. Davis, John C. Haltiwanger, Ron S. Jarmin, Josh Lerner, Javier Miranda (2011)** Private equity critics claimed that leveraged buyouts bring huge job losses. To investigate this claim, they constructed and analyzed a new data set that covers U.S. private equity transactions from 1980 to 2005. They tracked 3,200 target firms and their 150,000 establishments before and after acquisition, comparing outcomes to controls similar in terms of industry, size, age, and prior growth. Relative
to controls, employment at target establishments declined 3 percent over two years post buyout and 6 percent over five years. The job losses were concentrated among public-to-private buyouts, and transactions involving firms in the service and retail sectors. But target firms also created more new jobs at new establishments, and they acquired and divested establishments more rapidly. When they considered these additional adjustment margins, net relative job losses at target firms were less than 1 percent of initial employment. In contrast, the sum of gross job creation and destruction at target firms exceeded that of controls by 13 percent of employment over two years. In short, private equity buyouts catalyzed the creative destruction process in the labor market, with only a modest net impact on employment. The creative destruction response mainly involves a more rapid reallocation of jobs across establishments within target firms.

**Thillai Rajan Annamalai (2012)** undertook a comparative case study analysis of four Asian countries: Thailand, Malaysia, Singapore, and Taiwan to examine main government policies in equity financing and capital market funding to support entrepreneurial development in Asia. The study found that the government intervention model is successful in Singapore and Taiwan. Although Singapore and Taiwan have clearly defined agencies responsible for carrying out policy implementation, Malaysia and Thailand suffer from having redundant organizations/agencies competing on offering similar innovation financing schemes. The study offered effective innovation financing policy recommendations to support the national economic and social development. They suggested that proposed policies can be integrated into national strategies to strengthen the innovation system of the Asian countries.

**Albert N. Link, Christopher J. Ruhm, Donald S. Siegel (2012)** examined a rich project-level data set consisting of entrepreneurial firms receiving Small Business Innovation Research (SBIR) program research awards. They found that SBIR firms attracting private equity investments are significantly more likely to license and sell their technology rights and engage in collaborative research and development agreements. Their results revealed that private equity investments accelerate the development and commercialization of research-based technologies, thus contributing to economic growth. They concluded that both public investments and private investments are key to innovation performance.
Olufemi Babarinde (2012) analyzed the steady growth of the private equity industry in Africa, noting, among other things, the infancy of the industry, the reasons behind its growth, the comparatively small size of the industry, and recent trends in the industry on the continent. He further analyzed the structure of private equity fundraising and investment in Africa by investigating and profiling private equity activity in the region by the scope of activity, sectors receiving the most attention, destinations, and the firms and investors. He found that the private equity industry in Africa is growing because the continent is loaded with business opportunities. He further suggested that to keep fund managers and investors interested in the continent’s PE market and surmount its inherent challenges, African governments must continue to adopt investor-friendly and business-friendly policies.

Thillai Rajan Annamalai and Maulik Doshi (2012) found that real estate sector in India had attracted substantial investment from private equity investors since 2006. This study was based on an analysis of 290 PE deals in real estate and investment of $15 billion during 2004 – 10. During the above said period real estate sector accounted for 34% of the total PE investments in India. The characteristics of projects that have obtained PE investment indicate that these are very large projects. Eighty percent of the PE investment in real estate has been from foreign PE firms. Most of the investments have been made at the project or SPV level to facilitate better monitoring post investment. The diligence and active monitoring that is normally associated with PE investments have brought in the much needed transparency and better corporate governance standards to this sector. Tier 2 cities accounted for as much investment as that of Tier 1 cities. However, the average investment size in Tier 2 cities was much higher than that of Tier 1 cities. By taking top class real estate development beyond the boundaries of Tier 1 cities, the PE firms have in a way contributed to the development of some of the smaller cities.

Thillai Rajan Annamalai and Vishal Prasad Kamat (2012) examined the investment pattern of VC/PE that can impact the long-term growth of the industry. They found that a large proportion of the deals were Round 1 investments, with a dramatic drop in subsequent rounds. Most investments were in late-stage financing and take place many years after the incorporation of the investee firm. The industry is also characterized by the short duration of the investments. They suggested that to ensure long-term growth of the industry in India, investments should be made in early...
stage financing, investors should stay invested for a longer duration and larger rounds of funding should be made in the portfolio companies.

Robert S. Harris, Tim Jenkinson, Steven N. Kaplan (2012) presented evidence on the performance of nearly 1400 U.S. private equity (buyout and venture capital) funds using a new research-quality dataset from Burgiss, sourced from over 200 institutional investors. Using detailed cash-flow data, they compared buyout and venture capital returns to the returns produced by public markets. They also compared the evidence from Burgiss to that derived from other commercial datasets – Venture Economics, Prequin and Cambridge Associates – as well as recent research. They found better buyout fund performance than has previously been documented. This in part reflects recently discovered problems with data provided by Venture Economics, upon which several previous studies had relied. Average U.S. buyout fund performance has exceeded that of public markets for most vintages for a long period of time. The outperformance versus the S&P 500 averages 20% to 27% over the life of the fund and more than 3% per year. Average U.S. venture capital funds, on the other hand, outperformed public equities in the 1990s, but have underperformed public equities in the 2000s. Using individual fund data, they explored the relationship between absolute measures of performance – internal rates of return (IRR) and multiples of invested capital and performance relative to public markets. Within a given vintage year, performance relative to public markets can be predicted well by a fund’s multiple of invested capital and IRR, so they were able to estimate the performance relative to public markets that would have been derived from the other commercial datasets, had the required cash-flow data been available. They found that private equity performance in the other commercial sources other than Venture Economics is qualitatively similar to that they found using the Burgiss data.

Soni and Priyan (2013) attempted to look at one part of venture capital investment process i.e. the pre-investment actions of Indian Venture Capitalists (VCs). Specifically, the paper examined use of various deal sources, evaluation criteria and syndication practices. In addition to this, it also focused upon various investment preferences of such investors such as stage of investments, amount of investments and instruments of financing used by them. The findings revealed that referral system was the most preferred source of deal by Indian VCs. With respect to evaluation criteria, it was found that VCs in India gave more importance to the personality, skills and
experience of the entrepreneur/management followed by financial and other non-financial considerations. Further, many VCs would prefer to syndicate the deal with other VCs mostly at the later stages for various motives.

Thillairajan and Ankit Jain (2013) found that incubation centers have emerged as an important source of finance and support for new and nascent companies. In line with the worldwide trend, there has been a substantial increase in the number of incubation centers in India during the past 10 years. Using data from 159 incubators and a sample of 1,058 incubates from 40 incubators; this article provided an analysis of the trends in incubation support in India. It revealed that universities play an important role in providing incubation support—67% of the incubators were based in universities. Not only are there more incubators functioning in universities, but they have also been functioning for longer period. In addition 57% of the incubators were in private organizations and 43% were in public sector organizations. There were interesting variations between incubation support and venture capital and private equity (VC/PE) investment in India. Most of the VC/PE investments in India are seen in metro cities whereas in the incubation, most of the incubation centers and incubate are located in non-metro cities. VC/PE investments are largely driven by the private sector, whereas the public sector plays an important role in incubation support and financing. Private sector incubators are more effective than public sector incubators as measured by the activity indicator and graduation ratio.

Lily Fang, Victoria Ivashina, Josh Lerner (2013) found in their research that bank-affiliated private equity groups account for 30% of all private equity investments. Their market share was highest during peaks of the private equity market when the parent banks arrange more debt financing for in-house transactions yet have the lowest exposure to debt. Using financing terms and ex-post performance, they showed that overall banks do not make superior equity investments to those of standalone private equity groups. Instead, they appear to expand their private equity engagement to take advantage of the credit market booms while capturing private benefits from cross-selling of other banking services.

Morten Sorensen, Neng Wang, Jinqiang Yang (2013) investigated whether the performance of Private Equity (PE) investments is sufficient to compensate investors (LPs) for risk, long-term illiquidity, and management and incentive fees charged by
the general partner (GP). They analyzed the LP’s portfolio-choice problem and found that management fees, carried interest and illiquidity were costly, and GPs must generate substantial alpha to compensate LPs for bearing these costs.

Anson Wong Lai Kuen (2014) investigated the importance of institutional forces to shape the venture capitalists’ investment activities of VC firms in China, India, Japan and Hong Kong and has reached a few of interesting findings. Firstly, in China and India, the venture capital funding is focused on early-stage ventures and the government support is an important factor that results in high number of VC deals at early stage in both China and India even though their legal systems to protect investors are not strong. Secondly, in Japan and Hong Kong, most VC funding is provided at expansionary and later stages of development of ventures because of their well-established stock market. Thirdly, availability of government financial incentives for establishment of high-tech ventures is not the most critical driver to increase the possibility of young ventures getting VC funding. Finally, the article discovers a substitution effect of social networks and legal systems in Asian venture capital markets. Entrepreneurs with good social networks with venture capitalist are highly likely to get venture capital financing to support their businesses as the relationship is one of the most important selection criteria to investment decisions.

Thillai Rajan, Pawan Koserwal, and S. Keerthana (2014) found that India has emerged as one of the largest marketplaces for social venture investing. This article provided a perspective of social venture investments in India based on an analysis of 523 deals in 212 companies. The results indicated that venture funding for social enterprises had several distinctive characteristics such as smaller investment sizes, early stage investing, and longer investment duration. Financial inclusion has been the main investment thesis, as evidenced by the large number of investments in microfinance companies. Most investments were in companies that facilitated consumption at the base of the pyramid segment, rather than in companies that created income and employment opportunities. Creation of dedicated social venture funds would benefit the sector, as such funds made more investments as compared to mainstream venture funds. Evidence from the microfinance industry showed that the scale of the investee company was one of the important criteria for investment. Performance parameters of microfinance companies that had venture investment did
not significantly vary from those that were not venture funded, indicating the need for
more active contributions and value addition from the investors.

Sanjiv Kaul, Reghu Balakrishnan (2014) found that market sentiments have
turned positive with the perception of a strong and stable government under Narendra
Modi's leadership coupled with an action-oriented bureaucracy. Also, now is a good
time for fund-raising and hence, the need to monetize assets that can generate
liquidity to the investors. An upbeat market, a stable government at Centre and
opportunities to raise second or third funds are cited as reasons for boom in
momentum opens exit route for PEs in India.

Shanthi Divakaran, Patrick J. McGinnis and Masood Shariff (2014) examined the
constraints for private equity financing of small and medium enterprises in developing
economies. In addition to capital, private equity investors bring knowledge and
expertise to the companies in which they invest. Through active participation on the
board of directors or in partnership with management, private equity investors equip
companies with critical improvements in governance, financial accounting, access to
markets, technology, and other drivers of business success. Although private equity
investors could help to create, deepen, and expand growth of small and medium
enterprises in developing economies, the vast majority of private equity in such
markets targets larger or more established enterprises. Technical assistance, when
partnered with private equity, can unlock more investor commitments and
considerably enhance the ability of small and medium enterprises in emerging
markets to raise private equity capital. Technical assistance provides funding that
allows private equity funds to extend their reach to smaller companies. Technical
assistance can mitigate some level of risk and increase the probability of successful
investments by funding targeted operational improvements of investee companies.
Dedicated technical assistance facilities financed by third parties, such as
development finance institutions, governments, or other parties, have emerged to fill
this critical need. The paper discusses the provision of investment capital twinned
with technical assistance, which is now more accepted by limited partners and general
partners or fund managers and is becoming more of a market model for private equity
finance focused on small and medium enterprises.