

**PRIVATE EQUITY FUND FOR INDIAN INFRASTRUCTURE SECTOR**

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**Abstract**

Venture Capital/Private equity (VC/PE) financing of infrastructure is commonly seen in most of the countries today; however in Indian infrastructure sector it is a recent phenomenon. Though VC/PE investments happened in Indian infrastructure even in the past, the growth has been substantial in recent years. This paper analyses the VC/PE investments in Indian infrastructure sector. The findings are based on the analysis of 573 PE deals in Indian infrastructure during 2004 to 2014. Results indicate that PE investments in Indian infrastructure have become more inclusive over the years and it has not restricted to one subsector only. PE investment shows a growth rate of 63.31 percent and expected to further increase.

Keyword: *Investment, Infrastructure, Private Equity, Venture Capital*

**1. INTRODUCTION:**

India is the fourth largest economy of the world. However, one fact which inhibits its growth and development is the lack of world class infrastructure. Infrastructure investment is a prerequisite to attain GDP growth of 8% or above. Physical infrastructure has a direct bearing on the development and overall growth of economy. But, the strong population growth in India has created serious inadequacies in the infrastructure sector, its growing consumer market and travelling needs are generating enormous pressure for modernization and its expansion (1).

Infrastructure projects are complex, highly capital intensive and by nature have long gestation period (2). Due to capital market imperfections, the infrastructure financing and financing cost tends to be higher (3). Government of India has targeted to increase the infrastructure investment from US\$ 500 billion in the Eleventh Five Year Plan to US\$ 1 trillion in the Twelfth Five Year Plan (4). Earlier infrastructure financing was entirely by the Government and depended on budgetary allocation. Given the huge requirement, Government is unable to finance all the infrastructure requirements alone. Moreover current lending rules, Basel III norms and sectoral caps further limit bank ability to finance infrastructure projects. The traditional capital market's failure to provide finance has made PE an important source of finance for infrastructure sector. The PE

financing in Indian infrastructure sector increased to US\$ 23415.19 million in 2014 from US\$ 208.00 million in 2004 (5).

Since the trend of PE investment in Indian infrastructure has been recent, there has been limited research so far on the role of this funding in infrastructure sector. The paper is an attempt to address this gap. Specifically, this study analyses the investment trends and patterns of PE funds investments in Indian infrastructure sector. The rest of the paper is organised as follows. Section 2 gives a short review of investment requirement of Indian infrastructure sector. Section 3 describes the main data source used in this study. Section 4 presents the trend analysis of PE investment during the study period. Section 5 presents the conclusion followed by implication, limitations and scope for future research in section 6.

## **2. INVESTMENT REQUIREMENT OF INFRASTRUCTURE SECTOR IN INDIA:**

India has the potential to become third largest GDP in the world in the next decade (6). However, to realise this potential India needs to ensure sustainable and rapid development of infrastructure. The Twelfth Plan represents a significant funding requirement in terms of infrastructure investment. The investment in Indian infrastructure is likely to rise from 7.55 per cent of GDP in Eleventh Plan to 9.95 per cent of GDP during Twelfth Plan (4). In the mean while infrastructure has to be modernised and upgraded constantly to ensure sustainable and long term economic growth (1). The share of private investment is projected to increase to approx 50% over the Twelfth Five Year Plan as compared to 37.53% during the eleventh Five Year Plan (6, 7). The Committee Report on infrastructure financing (8) noted that despite of large savings in India, there is a serious problem in the availability of long term funds for the infrastructure development. Most of the debt financing in infrastructure during eleventh five year plan period was through from Banks, Non Banking Financial Corporation's (NBFC'S), External Commercial Borrowings (ECB'S) and Insurance Companies. The working subgroup report on Infrastructure (6) estimated that the funding gap in the infrastructure sector during the Twelfth Plan Period is likely to be 1330874 crores which is around 21 per cent of the estimated requirement. Thus, financing infrastructure in India will be a big challenge in the coming year.

## **3. DATA SOURCE:**

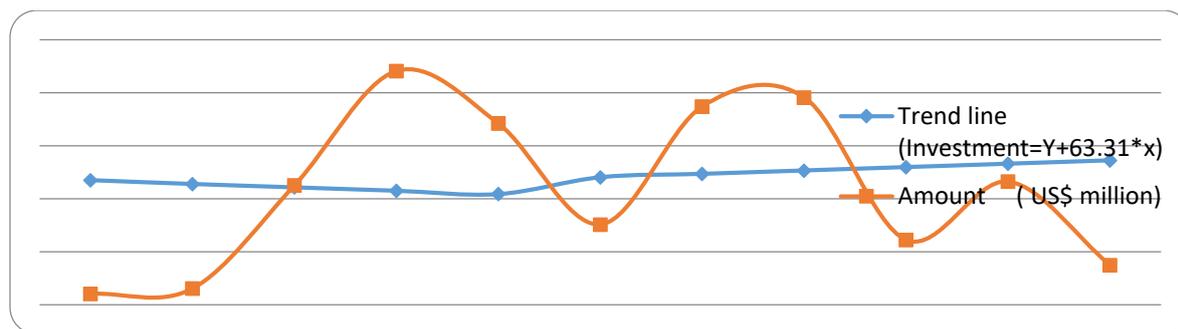
This study uses the PE investment transactions in infrastructure firms during 2004 to 2015. The deal level data used in this study has been sourced from Venture Intelligence database. This database records the date of venture financing, size of investment, details of investors and number of participants in each deal. Venture Intelligence obtains this data from individual and institutional investors in PE funds. The correctness and accuracy has been checked by verification from other sources, such as newspapers and reports.

The database for the covered period shows 573 PE ideals in Indian Infrastructure sector. The venture intelligence database covers Logistics, Energy, Engineering & Construction, Travel & Transport and telecom under infrastructure and therefore we have confined our study to these sub- sectors only. The informal venture capital and angel investors are excluded from the scope of the study.

**4. DATA ANALYSIS AND FINDINGS:**

Figure 1 shows the overall trend of PE investment in Indian infrastructure sector. PE investment in India has been increasing substantially. An amount of \$ 23415.19 million has been invested in 573 deals by PE funds in Indian infrastructure sector during 2004 to 2014. Venture Intelligence data indicates that PE investment in Indian infrastructure showed an upward trend till the year 2007. The investment value shows a declining trend in the year 2008 and 2009. In line with its revival of developed economy in 2010, PE in Indian infrastructure sector also recovered quickly. Overall the sector shows a positive rate of growth of 63.31%.

**Figure 1: Investment trend in Indian Infrastructure sector**



Source: Compiled through data analysis of VC/PE funds investment in Indian infrastructure sector obtained from Venture Intelligence database, TSJ Media

The investor-type wise share of PE investment in Indian Infrastructure sector over the study period is given in the Figures 2. Though the foreign investors have invested only in 42.8 % of the total deal, however, in terms of amount of investment, foreign investors account for 49.2 % of the PE investment, whereas domestic investors contributed only 26.1% of total PE investment in India infrastructure. Co-investment funds contribute 24.1 % of the total PE investment.

**Figure 2: Percentage of total investment based on Type of PE funds (Value in \$ million) during 2004 to 2014**

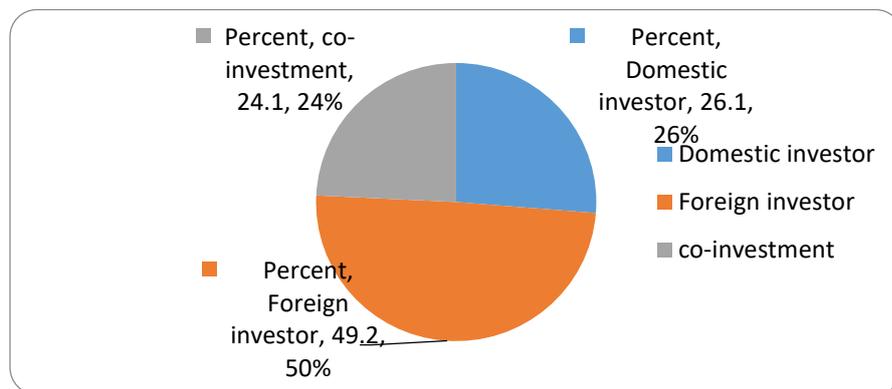
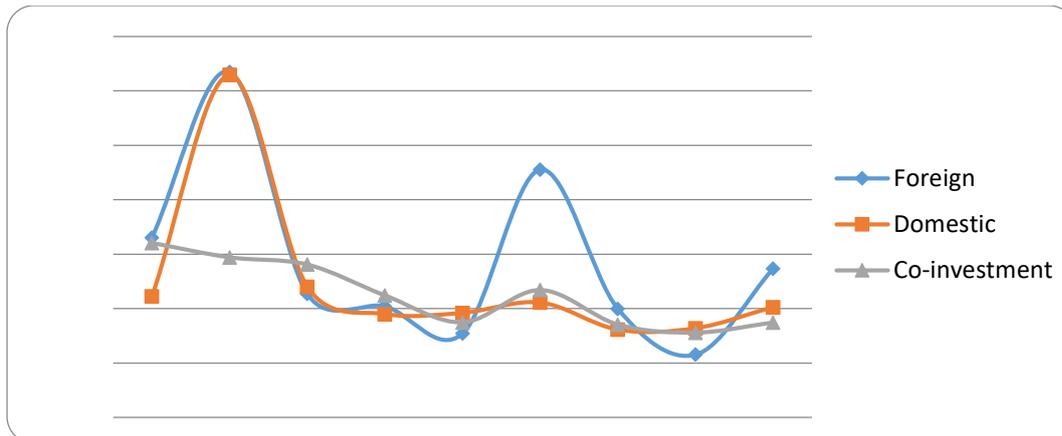


Figure 3 shows year-to-year investment growth rate of PE investment for different investor types. Foreign and Co-investment showed a growth of 261 % and 241 % respectively over that of 2004 compared to a growth of 44 % of domestic investors. From then on, the growth rate of domestic, foreign investors and co-investment grew by 858.23 %, 869 % and 188.31% respectively in 2006 and 80.61 %, 54.71 % and 161.83 % respectively in 2007. Due to global recession, all investors

showed a negative rate of growth in 2009. Foreign investors were able to respond faster to growth showed a growth rate of 510 % in 2010 which was much higher than the domestic and co-investors. All types of investors exhibit the negative rate of growth in year 2011 & 2012 corresponding with low GDP growth rate of 6.61 % and 4.72 % respectively observed and low activity in IPO market.

**Figure 3: Year to Year investment growth rate for type of PE funds**



Source: Compiled through data analysis of VC/PE funds investment in Indian infrastructure sector obtained from Venture Intelligence database, TSJ Media

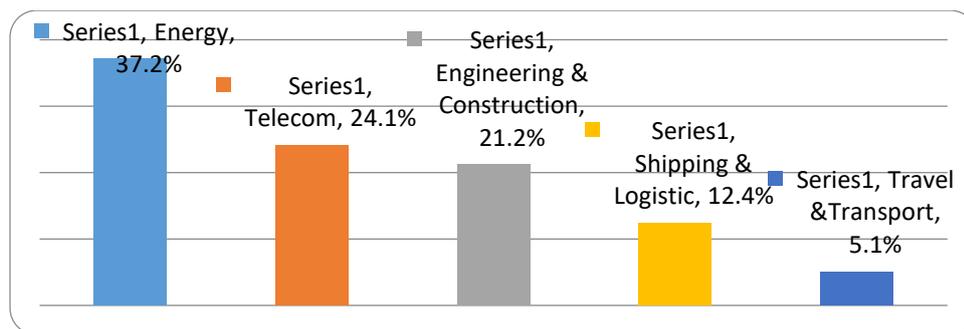
The infrastructure sub-sector wise split-up of total PE investments over the study period are given in the Table 1. As can be seen from the Table 1 Energy, Shipping & Logistic and Engineering & Construction sub-sector constitute a majority of the total PE investments and consistently account for more than 87 % of the total amount invested in that year and therefore investment picture shows skewed distribution of investment across sectors for all the ten years.

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Energy	21.90	10.20	17.38	39.05	70.47	26.93	56.19	27.72	45.78	39.83
Engineering & Construction	22.30	13.32	24.86	32.25	21.18	13.81	28.06	26.54	57.85	35.78
Shipping and Logistic	3.07	13.83	24.33	20.83	20.17	28.93	26.27	37.78	41.13	17.11
Telecom	NA	NA	253.05	199.74	122.50	57.66	144.00	NA	0.60	1260.00
Travel and Transport	NA	32.48	8.41	6.78	36.87	13.33	14.33	15.00	64.17	NA

Source: Compiled through data analysis of VC/PE funds investment in Indian infrastructure sector obtained from Venture Intelligence database, TSJ Media

The sub-sector wise share of total PE investments in Indian Infrastructure sector over the ten year period is given in the Figure 4. This shows that in terms of amount of investment Energy sub-sector has attracted highest amount of investment (37.2 % of the total PE investment) in infrastructure sector over the covered period. This probably due to the fact that in Power subsector demand supply gap is significantly large, government encouragement is appreciable and exit opportunities are relatively more (9).

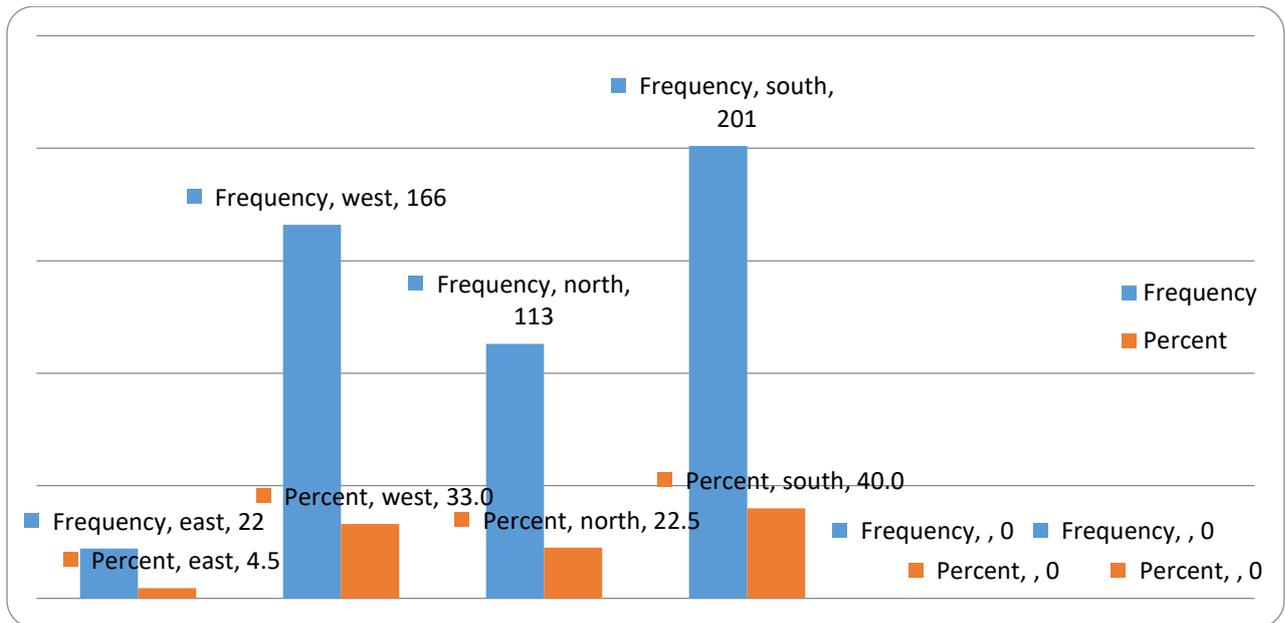
**Figure 4: Sector-wise PE investments in Indian infrastructure sector in terms of amount investment**



Source: Compiled through data analysis of VC/PE funds investment in Indian infrastructure sector obtained from Venture Intelligence database, TSJ Media

Figure 5 presents the split of 540 infrastructure deals for which region specific data is available. Overall the distribution of PE investment in infrastructure sector across different regions is quite skewed with very low PE deals in eastern region as compared to other regions due to low level of industrial activity in this region vis-à-vis the rest of India. The Deloitte report on Private Equity and IVCA PE Report reported this trend in 2010 and 2012 respectively. Considering the average amount per deal, north region has witnessed significantly high level of investment (Table 2). The opportunities for infrastructure development in the north India played an important role in channelizing the investment to this region. Broadly the results are also in line with Kamath and Rajan report on Indian venture capital and private equity in 2011 (10, 11).

Figure 5: Region-wise PE investment in Indian Infrastructure (Number of deals)



Source: Compiled through data analysis of VC/PE funds investment in Indian infrastructure sector obtained from Venture Intelligence database, TSJ Media

Region of investment	Mean	N	Std. Deviation	Sum
East	28.6514	22	30.91732	630.33
West	43.0895	181	78.31509	7799.20
North	61.9790	122	167.43324	7561.44
South	31.6929	215	38.99215	6813.97

Source: Compiled through data analysis of VC/PE funds investment in Indian infrastructure sector obtained from Venture Intelligence database, TSJ Media

## 5. CONCLUSION:

Infrastructure financing requires a mix of financial resources from banks, corporate sector, pension funds, insurance, government and private participation. PE funds have invested \$ 23415.19 million across 573 deals in Indian infrastructure sector during 2004 to 2014. The study analyses year-wise, infrastructure subsector-wise, investor-wise and region wise PE investment in Indian infrastructure sector. It was found that PE investments in Indian infrastructure sector have become more inclusive over the years and it has not restricted to only one sub-sector. When compared Y to Y growth rate, PE investment shows a growth rate of 63.31 percent and expected to further increase. In terms of value, foreign investors account for a larger proportion of PE investment in Indian infrastructure sector. Analysis of regional distribution of investment

indicates that during 2004 to 2014 not only number of investments increased, the diversity of investment across regions has also increased. The Energy sector attracted most interest from PE investors, increasing to 37.2 per cent of total PE investment in Indian infrastructure sector during 2004-2014. The Government endeavour to increase investment in infrastructure is also expected to receive PE support in other infrastructure subsectors.

#### **6. RESEARCH IMPLICATIONS, LIMITATIONS AND SCOPE FOR FUTURE STUDY:**

The findings of the study have several implications for Venture practitioners, business policy makers and academicians. Budgetary support have been the dominant source of infrastructure financing in India, but due to large fiscal deficit the Government will not be able to meet all the requirements on its own. This presents a tremendous opportunity for PE Funds. There are also plenty of opportunities for buy-out by unlocking the delayed, sick government owned projects. However, this can not be achieved unless Government ensures favourable entry and exit. Similarly, prohibition on purchase of secondary shares, convertible instruments and investment in non-banking finance companies for SEBI registered venture capital funds should be removed. Missing and incomplete data are the major constraints. Nevertheless, it would be interesting to analyse the impact of PE investments on infrastructure firms.

#### **REFERENCE:**

1. Tripathi, S.(2015). Innovative Financing Options for Infrastructural Projects in India in Innovation and Creativity Management: the Design for Future (Edited), Bharti Publications, New Delhi, 223-238.
2. Sharma, J.K & Tripathi, S. (2015). Financing of Infrastructure in India. *Advance Journal of Economics Business & Management*, 2(3), 282-286.
3. Esty, B.C., (2004). Why Study Large Projects? An Introduction to Research on Project Finance. *European Financial Management*, 10(2), 213-224.
4. Economic Survey (2013-2014), Retrieved from <http://indiabudget.nic.in>
5. Tripathi, S., (2015). Syndication of VCPE Investments: Evidence from the Indian Infrastructure Sector. *Indian Journal of Finance*, Retrieved from <http://www.indianjournaloffinance.co.in/index.php/IJF/article/view/72352>.
6. Planning Commission Working Sub-Group Report on Infrastructure (2012) Retrieved from [http://planningcommission.gov.in/aboutus/committee/wg\\_sb\\_infrastructure.pdf](http://planningcommission.gov.in/aboutus/committee/wg_sb_infrastructure.pdf)
7. Draft approach Paper of Twelfth Five Year Plan, Retrieved from <http://planningcommission.nic.in/plans/planrel/12appdrft/approach12plan.pdf>.
8. The Report of The Committee on Infrastructure Financing, (2007), Retrieved from [http://www.pppinindia.com/deepak\\_parekh\\_report.pdf](http://www.pppinindia.com/deepak_parekh_report.pdf).
9. IVCA Bain India Private Equity Report, 2011, Retrieved from [indiavca.org/pdf/IVCABainIndiaPrivateEquityReport2011.pdf](http://indiavca.org/pdf/IVCABainIndiaPrivateEquityReport2011.pdf)
10. Rajan, T & Kamat, V. (2010). Indian Venture capital Private Equity Report, Retrieved from [ivca.in/pdf/2014vcpa.pdf](http://ivca.in/pdf/2014vcpa.pdf).
11. Deloitte Report on Private Equity: Fueling India's Growth. Retrieved from <http://www.deloitte.com/in>