EUROPEAN ACADEMIC RESEARCH
Vol. III, Issue 1/ April 2015

Impact Factor: 3.4546 (UIF)
DRJI Value: 5.9 (B+)

ISSN 2286-4822
www.euacademic.org

Financial Analysis of IT SEZ Project: A Case Study

Dr. DIPTI RANJAN MOHAPATRA
Associate Professor (Economics)
School of Business and Economics
Madawalabu University
Bale Robe, Ethiopia

Abstract:

Punjab state in India is promoting the state as a favoured destination to make investment in IT knowledge based industry. In order to promote IT and ITES services, Punjab government formulated an infrastructure task force in 2009. This task force is looking after, establishment of new IT, ITES SEZ Parks in different locations in Punjab through Punjab Information and Communication Technology Corporation Limited. Roopnagar and Kapurthala were two selected destination for IT SEZ Park. Here, an attempt has been made to find out the financial viability of IT SEZ Park project in above-mentioned destinations. The financial benefits are calibrated by carrying out cost-benefit analysis approach of the expenditures incurred and benefits accrued. This is further checked with Financial Internal Rate of Return (FIRR). The land acquisition and infrastructure development cost are major costs which are financed through loan and by floating equity. Thus, the major outflow here was the capital cost incurred on land acquisition and land development cost that was financed through debt. Developed lands in IT Park were leased afterwards under certain agreements. The income or inflows were income on rents from lease of developed land. The FIRR was carried out with a debt-equity model of 2:1. A net cash flow technique was further adopted. In Roopnagar, two options were exercised taking into account different market rate of inflation. Here, the project IRR was 15% for IT and IT SEZ Park and 26% for Equity IRR in one option and 23% for Project IRR and 43% for Equity IRR in another option. In case of IT, IT SEZ Park in

Kapurthla, the 15% was Project IRR and 28% Equity IRR. Overall the proposed investment programmes were found to be financially viable.

Key words: Financial Internal Rate of Return (FIRR), project IRR, equity IRR, debt-equity model, financial viability, cash flow, impacts of inflation

JEL Classification: G13, G31, H43, R33

1.0 Introduction

Punjab Information and Communication Technology Corporation Limited (PICTCL) known as Punjab Infotech is a nodal agency of the government of Punjab for the promotion of IT industry in the State. PICTCL is engaged in promoting the state of Punjab as a favored destination for investors for promotion and dissemination of IT Knowledge Industry such as the IT hardware, IT software and other Knowledge Industry units like biotechnology, nanotechnology, and telecommunications etc. IT software industry includes IT software, IT services and IT Enabled Services (ITES). Punjab government formulated a task force in 2009 and the task force suggested Punjab Infotech to examine the feasibility of developing IT Park/SEZ in the region that included one in Kapurthala and one at Rail Majra in Roopnagar (Mohali) in Punjab state of India. A financial feasibility report was prepared to find out the possibility of private sectors participation in such project. Here, we have presented the financial analysis of project on a commercial format.

Study Area

The study areas are IT, IT SEZ Park at Roopnagar and Kapurthala in Punjab state in India. There are two sections A and B, in which we have carried out the financial analysis for Roopnagar and Kapurthala projects separately.

(A) IT, IT SEZ PARK Roopnagar

Background of IT, ITE SEZ Park in Rail Majra, Roopnagar (Mohali): The land in Rail Majra in Roopnagar is located in village Rail Majra in Roopnagar district of Punjab which is close to Rayat and Bahra Institution and DCM Engineering and is situated on Ropar-Garhshankar road in Punjab. This area belongs to Punjab Infotech. Thus, it identified the site adjoining IIT Roopnagar for development of IT/ITES Park and SEZ. A detailed project report of the IT Park was prepared through a private company, CES India Private Limited, New Delhi. As per the layout plan of the IT Park, plots of various sizes were proposed for allotment to IT Units. Punjab Small Industries & Export Corporation Limited (PSIEC) was entrusted with the development of internal infrastructure. The proposed land parcel had a mix of small and medium plots to accommodate IT, ITES, BPO and KPO companies as well medium and large IT companies to start their operations. It was expected that on the project would provide direct and indirect employment to about 10,000 persons on its completion. The area was also expected to be included in the Master Plan of Ropar, Punjab.

The financial analysis reviews the merits of the project to be implemented on commercial format i.e. assessing whether the project is attractive enough for private sector participation. The project is proposed to be implemented in 2010 -17 with land acquisition in the financial year 2010-11 and the Infrastructure Development to be done during the financial year 2010-17. PICTCL would have taken credit from its bank for development of infrastructure, and thereafter leasing the same to selected developer. Punjab Infotech planned to charge a lease rent for a lease period as may be agreed upon. The infrastructure development included development of road, power and telecom, water supply, sewerage and storm water drainage besides the development of IT, ITES SEZ Park.

2.0 Literature Review:

There exists a basic difference between financial and economic analysis. The financial analysis deals with the project from the market point of view whereas the economic analysis deals from the national economy point of view. Further the economic analysis deals with technically or economically important projects e.g. development projects. However, the financial analysis is an essential prerequisite for the economic analysis where there is a need to consider about the non-economic demands and effects of a project. (Kampf et.al. 2009).

What are the reasons for conducting a financial analysis for a public sector project? One vital reason is to ensure the availability of funds and to finance the project throughout its investment, operation and maintenance phases without any bottleneck. Expected positive economic returns although are important in a project life cycle but is not a sufficient condition to validate undertaking a project. It is also important to ensure that there are enough funds to finance the operations of the project. There are number of examples of development projects with expected high economic returns but have failed due to financial hindrances. (Jenkins et. al. 2011),

As per the Asian Development Bank guidelines, financial benefit-cost analysis assess the financial viability of a proposed project, i.e., if the proposed project is financially attractive or not to make investment. Here, the unit of analysis is project and not the entire economy. Therefore, attention is paid for the additional financial benefits and costs to the utility, attributable to the project. But the economic benefit-cost analysis evaluates the project from the viewpoint of the entire economy whereas the financial analysis evaluates the entire utility by providing projected balance, income, and sources and applications of fund statements. The financial benefit-cost analysis includes the following steps: (i) determination of annual project revenues (ii) determination of project costs (iii) estimation of annual project net benefits (iv) determination of

the appropriate discount rate (v) estimation of average incremental financial cost (vi) estimation of financial net present value (vii) estimation of the financial internal rate of return and (viii) risk and sensitivity analysis. Project revenues, costs and net benefits are estimated with-project and without-project conditions. Again these are estimated on the basis of constant prices for a selected year (e.g., constant 2004 prices), typically using the official exchange rate at appraisal. The revenues of the project comprise of entirely user charges which exclude government subsidies.

Project Revenue: The project revenues are generally determined for different users, such as households, government institutions and private commercial/industrial establishments. Each of this user group has different consumption pattern, charged different tariff and have different response to tariff increase.

Project Cost: The preliminary project costs are generally worked out in detail by cost- engineers after the selection of the least-cost alternative. The following are main categories of project cost (i) investments cost (ii) operation and maintenance cost and (iii) re-investments cost during the project life cycle.

Financial Benefit of the Project: The project net benefit is the difference between the project revenues and project costs. The net benefit stream is called the net cash flow.

Financial Rate of Return (FIRR): The profitability of a project to the entity is indicated by the project's financial internal rate of return (FIRR). The FIRR is also the discount rate at which the present value of the net benefit stream in financial terms becomes zero.

3.0 Objective

The objective of this paper is to find out the financial viability of setting up of IT, IT SEZ Park in Roopnagar and Kapurthala in Punjab.

4.0 Methodology

The detail methodology include infrastructure development pattern, project costing, developing a debt –equity model and finally carrying out the financial analysis.

4.1.1 Infrastructure Provision: Out of the total area of 240.0 acres, the infrastructure would be developed in 183.00 acres. This includes 130.2 acres for SEZ and 52.8 acres for Non-SEZ. The detail of Infrastructure development provision is given in Table 1.

Table 1: Infrastructure Development Provision

Sl. No.	***Type***	***Area in Acres***
SEZ		
1	Processing Zone (IT)	67.50
2	Residential	17.20
3	PSP	4.20
4	Utility	10.80
5	Commercial	26.00
6	Convention & Recreation	4.50
Non-SEZ		
7	IT Park	9.30
8	Commercial	8.30
9	Institution	35.20
Total		***183.00***

The infrastructure would be developed in eight years during 2010 to 2017 in two phases. The first phase span 2010 to 2014 and second phase is from 2015 to 2017. The pattern in which infrastructure would be developed is given in Table 2 in percentage.

Table 2: Infrastructure Development Pattern
(%age of area to be developed)

Year	***Yr1***	***Yr2***	***Yr3***	***Yr4***	***Yr5***	***Yr6***	***Yr7***	***Yr8***	***Yr9***	***Yr10***
	2010	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*
Infrastructure Development Pattern	5%	10%	15%	20%	20%	15%	10%	5%	0%	0%

4.1.2 Cost and its Phasing: Based on technical details a detailed estimation of capital expenditure was made. The capital cost of the project is inclusive of cost of land acquisition and its development, and infrastructure provision. The land acquisition cost is INR 0.6 million per acre. Brief detail of capital cost is given in Table 3.

Table 3: Project Cost
(INR in million)

Sl. No.	***Items***	***Total***
1	Land Acquisition cost for total area of 240 acres	144.00
2	Infrastructure Development cost	916.30
TOTAL		***1060.30***

4.1.3 Debt-Equity Model: Here, a debt-equity model on 2:1 pattern was assumed to develop the project, which means the debt to be incurred is twice of the equity to be raised from the market. Thus, in 10 years period of 2010-2019 the total debt to be raised accordingly would be 706.8 million INR and total equity to be raised would be 353.5 million INR. The total interest @12% per annum to be paid during this period would be 212.0 million INR. The financial analysis was carried out under certain assumptions presented in Table 4.

Table 4: Assumptions of Debt-Equity Model

Sl. No.	***Items***	***Assumptions***
1	Debt -Equity	2:1
2	Interest rate	12%
3	Moratorium	1 year
4	Loan Repayment Period	10 years.
5	Land Acquisition	1 year

6	Infrastructure Development	8 years (2 Phases)
7	Construction Cost	Nil
8	Inflation	10%

The debt-equity models which include the total debt for infrastructure development, principal & interest payments and equity are presented in Table 5.

Table 5: Debt-Equity Models
(In million INR)

Year	*Yr1*	*Yr2*	*Yr3*	*Yr4*	*Yr5*	*Yr6*	*Yr7*	*Yr8*	*Yr9*	*Yr10*
	2010	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*
Opening Balance	0	126.5	124.3	122.2	168.0	183.2	152.7	106.9	61.1	15.3
Loans	126.5	61.1	91.6	122.2	122.2	91.6	61.1	30.5	0	0
Interest@12%	15.2	22.5	25.9	29.3	34.8	33.0	25.7	16.5	7.3	1.8
Principal Repayment	0	63.3	93.8	76.4	106.9	122.2	106.9	76.4	45.8	15.3
Closing Balance	126.5	124.3	122.2	168.0	183.2	152.7	106.9	61.1	15.3	0
Equity	63.3	30.5	45.8	61.1	61.1	45.8	30.5	15.3	0	0

5.0 Outflows and Inflows

5.1 Total Outflows: The total outflows include the expenditure incurred for land acquisition, development cost of the land and interest payments for loans. The land acquisition cost of 144 million INR was included with 46 million INR infrastructure development cost in the first year (2010). Thus, the first year infrastructure development cost of 190 million INR was inclusive of land acquisition cost. There is only infrastructure development cost and interest payment in the subsequent years. The total outflows are presented in Table 6.

Table 6: Total Outflows *(In million INR)*

Year	*Yr1*	*Yr2*	*Yr3*	*Yr4*	*Yr5*	*Yr6*	*Yr7*	*Yr8*	*Yr9*	*Yr10*
	2010	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*
Infrastructure Development Cost	190.0	92.0	137.0	183.0	183.0	137.0	92.0	46.0	0.0	0.0
Interest Payments	15.2	22.5	25.9	29.3	34.8	33.0	25.7	16.5	7.3	1.8
Total Outflows	*205.0*	*114.1*	*163.4*	*212.6*	*218.1*	*170.4*	*117.3*	*62.3*	*7.3*	*1.8*

5.2 Total Inflows: Total inflows include income from leased of developed land.

The land would be leased to the selected developers on a 99-years lease in the pattern. There is no land allocation in 2010 (Yr1). The land allocation pattern from Yr2 to Yr10 is presented in Table 7.

Table 7: Land Allocation Pattern

(Area in %)

Land Allocation Pattern (%)	***Yr2*** *2011*	***Yr3*** *2012*	***Yr4*** *2013*	***Yr5*** *2014*	***Yr6*** *2015*	***Yr7*** *2016*	***Yr8*** *2017*	***Yr9*** *2018*	***Yr10*** *2019*
SEZ									
Processing Zone (IT)	5%	7%	12%	17%	22%	25%	12%	0%	0%
Residential	0%	5%	7%	12%	17%	22%	25%	12%	0%
Public Semi Public	50%	0%	0%	0%	50%	0%	0%	0%	0%
Utility	50%	0%	0%	0%	50%	0%	0%	0%	0%
Commercial	5%	0%	20%	0%	30%	0%	0%	45%	0%
Convention & Recreation	50%	0%	0%	0%	50%	0%	0%	0%	0%
Non-SEZ									
IT Park	5%	7%	12%	17%	22%	25%	12%	0%	0%
Commercial	5%	0%	20%	0%	30%	0%	0%	45%	0%
Institution	0%	50%	0%	0%	50%	0%	0%	0%	0%

Thus, break-up of the area to be leased in the pattern mentioned above is given in Table 8. There was no leased in 2010 (Yr1).

Table 8: Break up of Leased Area

(In Acre)

Type of Land	***Area Leased (in acres)***									***Total Area***
	Yr2 *2011*	***Yr3*** *2012*	***Yr4*** *2013*	***Yr5*** *2014*	***Yr6*** *2015*	***Yr7*** *2016*	***Yr8*** *2017*	***Yr9*** *2018*	***Yr10*** *2019*	
SEZ										
Processing Zone (IT)	3.38	4.73	8.10	11.48	14.85	16.88	8.10	0.00	0.00	67.50
Residential	0.00	0.86	1.20	2.06	2.92	3.78	4.30	2.06	0.00	17.20
PSP	2.10	0.00	0.00	0.00	2.10	0.00	0.00	0.00	0.00	4.20
Utility	5.40	0.00	0.00	0.00	5.40	0.00	0.00	0.00	0.00	10.80
Commercial	1.30	0.00	5.20	0.00	7.80	0.00	0.00	11.70	0.00	26.00
Convention & Recreation	2.25	0.00	0.00	0.00	2.25	0.00	0.00	0.00	0.00	4.50
Non-SEZ										
IT Park	0.47	0.65	1.12	1.58	2.05	2.33	1.12	0.00	0.00	9.30
Commercial	0.42	0.58	1.00	1.41	1.83	2.08	1.00	0.00	0.00	8.30
Institution	0.00	17.60	0.00	0.00	17.60	0.00	0.00	0.00	0.00	35.20
Total (in acre)	***15.31***	***24.42***	***16.62***	***16.53***	***56.80***	***25.06***	***14.51***	***13.76***	***0.00***	***183.00***

The lease rent for financial year 2010-11 was fixed as given in the Table 9. The lease rent in each succeeding year was escalated at a rate of interest per annum taking into account

the inflation. Here two options (Option 1 and Option 2) were exercised with different lease rents respectively to carry out the financial analysis.

Option 1: In this option the lease rent was escalated in each succeeding year @ 10% per annum. The rent received from leased land per acre is presented in Table 9. The income received from lease of developed land is the multiplication of total area leased and lease rent received. The income of leased land is presented in Table 10.

Table 9: Lease Rents *(Option1)*
(In millions of INR per acre.)

Types of Land	***Yr2***	***Yr3***	***Yr4***	***Yr5***	***Yr6***	***Yr7***	***Yr8***	***Yr9***	***Yr10***
	2011	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*
SEZ									
Processing Zone (IT)	7.0	7.7	8.5	9.3	9.3	10.2	11.3	12.4	13.6
Residential	5.0	5.5	6.1	6.7	6.7	7.3	8.1	8.9	9.7
Public Semi Public	5.5	6.1	6.7	7.3	7.3	8.1	8.9	9.7	10.7
Utility	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	10.0	11.0	12.1	13.3	13.3	14.6	16.1	17.7	19.5
Convention & Recreation	10.0	11.0	12.1	13.3	13.3	14.6	16.1	17.7	19.5
Non-SEZ									
IT Park	7.0	7.7	8.5	9.3	9.3	10.2	11.3	12.4	13.6
Commercial	10.0	11.0	12.1	13.3	13.3	14.6	16.1	17.7	19.5
Institution	5.0	5.5	6.1	6.7	6.7	7.3	8.1	8.9	9.7

Table 10: Income from Developed Land *(Option1)*
(In millions of INR)

Types of Land	***Yr2***	***Yr3***	***Yr4***	***Yr5***	***Yr6***	***Yr7***	***Yr8***	***Yr9***	***Yr10***
	2011	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*
SEZ									
Processing Zone (IT)	23.6	36.4	68.6	106.9	138.4	172.9	91.3	0	0
Residential	0	4.7	7.3	13.7	19.5	27.7	34.6	18.3	0
Public Semi Public	11.6	0	0	0	15.4	0	0	0	0
Utility	0	0	0	0	0	0	0	0	0
Commercial	13.0	0	62.9	0	103.8	0	0	207.3	0
Convention & Recreation	22.5	0	0	0	29.9	0	0	0	0
Non-SEZ									
IT Park	3.3	5.0	9.5	14.7	19.1	23.8	12.6	0	0
Commercial	4.2	6.4	12.1	18.8	24.3	30.4	16.0	0	0
Institution	0	96.8	0	0	117.1	0	0	0	0
Total Inflows (Total Income)	*78.1*	*149.3*	*160.3*	*154.2*	*467.4*	*254.9*	*154.6*	*225.6*	*0*

6.0 Financial Analysis

6.1 Net Cash Flow

Net Cash Flow: The net cash flow is the difference between total inflows and total outflows.

Net Cash Flow from Equity: The net cash flow from equity is the difference between total inflows and equity value minus principal payment minus interest payment.

The net cash flow statement is presented in Table 11.

Table 11: Net Cash Flow Statement *(Option 1)*
(In millions of INR)

Year	***Yr1***	***Yr2***	***Yr3***	***Yr4***	***Yr5***	***Yr6***	***Yr7***	***Yr8***	***Yr9***	***Yr10***
	2010	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*
Net Cash Flow	-200	-40	-10	-50	-60	300	140	90	220	0
Net Cash Flow from Equity	-80	-40	-20	-10	-50	270	90	50	170	-20

6.2 Financial Internal Rate of Return

6.2.1 Financial Rate of Return (FIRR) in Option 1: Viability of the project is assessed on the basis of Project and equity IRR. The project is said to be viable if Financial Internal Rate of Return (FIRR) is above 12% according to World Bank (WB) and Asian Development Bank's (ADB) guideline. The IRR was calculated from the net cash flow statement presented in Table 11. The Project IRR was found to be 15 % and Equity IRR 26%. So in option 1 both project IRR and equity IRR were viable.

Option 2: In this case a different lease rent for financial year 2010-11 was fixed. In this option the lease rent was escalated in each succeeding year @ 2.5% per annum. The rent received from leased land per acre is presented in Table 12. The income received from lease of developed land is the multiplication of total area leased and lease rent received. The income of leased

land is presented in Table 13. All other assumptions of Financial Analysis remain the same as given in Table 4. There was no land allocation in 2010 (Yr1).

Table 12: Lease Rents *(Option 2)*
(In millions of INR per acre.)

Types of Land	***Yr2***	***Yr3***	***Yr4***	***Yr5***	***Yr6***	***Yr7***	***Yr8***	***Yr9***	***Yr10***
	2011	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*
SEZ									
- Processing Zone (IT)	10.0	10.3	10.5	10.8	10.8	11.0	11.3	11.6	11.9
- Residential	6.0	6.2	6.3	6.5	6.5	6.6	6.8	7.0	7.1
- PSP	5.0	5.1	5.3	5.4	5.4	5.5	5.7	5.8	5.9
- Utility	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- Commercial	14.5	14.9	15.2	15.6	15.6	16.0	16.4	16.8	17.2
- Convention & Recreation	14.5	14.9	15.2	15.6	15.6	16.0	16.4	16.8	17.2
Non-SEZ									
- IT Park	10.0	10.3	10.5	10.8	10.8	11.0	11.3	11.6	11.9
- Commercial	14.5	14.9	15.2	15.6	15.6	16.0	16.4	16.8	17.2
- Institution	6.0	6.2	6.3	6.5	6.5	6.6	6.8	7.0	7.1

Table 13: Income from Developed Land *(Option 2)*
(In millions of INR)

Types of Land	***Yr2***	***Yr3***	***Yr4***	***Yr5***	***Yr6***	***Yr7***	***Yr8***	***Yr9***	***Yr10***
	2011	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*
SEZ									
Processing Zone (IT)	33.8	48.4	85.1	123.6	159.9	186.3	91.6	0	0
Residential	0	5.3	7.6	13.3	18.9	25.1	29.2	14.4	0
Public Semi Public	10.5	0	0	0	11.3	0	0	0	0
Utility	0	0	0	0	0	0	0	0	0
Commercial	18.9	0	79.2	0	121.8	0	0	196.7	0
Convention & Recreation	32.6	0	0	0	35.1	0	0	0	0
Non-SEZ									
IT Park	4.7	6.7	11.7	17.0	22.0	25.7	12.6	0	0
Commercial	6.0	8.6	15.2	22.0	28.5	33.2	16.3	0	0
Institution	0	108.2	0	0	113.7	0	0	0	0
Total Inflows (Total Income)	*106.4*	*177.3*	*198.8*	*176.0*	*511.3*	*270.2*	*149.8*	*211.1*	*0*

Net Cash Flow: The net cash flow is the difference between total inflows and total outflows.
Net Cash Flow from Equity: The net cash flow from equity is the difference between total inflows and equity value minus principal payment minus interest payment.

The net cash flow statement is presented in Table 14.

Table 14: Net Cash Flow Statement *(Option 2)*
(In millions of INR)

Year	*Yr1*	*Yr2*	*Yr3*	*Yr4*	*Yr5*	*Yr6*	*Yr7*	*Yr8*	*Yr9*	*Yr10*
	2010	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*
Net Cash Flow	-200	-10	10	-10	-40	340	150	90	200	0
Net Cash Flow from Equity	-80	-10	10	30	-30	310	110	40	160	-20

6.2.2 Financial Rate of Return (FIRR) in Option 2: In option 2, the IRR was calculated from the net cash flow statement presented in Table 14. The Project IRR was found to be 23 % and Equity IRR 43%. So in option 2 both project IRR and equity IRR were viable as it is above WB and ADB's guideline 12%.

(B) IT/ITES/SEZ Park Kapurthala

Background of IT/ITES/SEZ Park Kapurthala: Punjab Small Industries and Exports Corporation (PSIEC) allotted 231 acres for development of Industrial Focal Point at Kapurthala. Out of this, 46.8 acres was allocated to PICTCL for the development of IT/ITES industry. This region is surrounded by Gurdaspur and Hoshiarpur in the North, Amritsar in the East, Jalandhar in Southwest and Ferozpur in the South in Punjab state of India. The land is about 9 km from the National Highway 1 and 22 km from Jalandhar (JDA) limits. The prospect of ITES industry is very high due to location of number of educational institutions in Jalandhar-Kapurthala region such as PTU, LPU, NIT, Science City and SSNIRE. The area is included in Master Plan of Kapurthala 2031. A detailed project report for the IT Park/SEZ, Kapurthala was prepared by CES India Private Limited, New Delhi.

7.1 Infrastructure Provision: Out of the total area of 46.8 acres, the infrastructure was developed in 33.50 acres in four years from 2010 to 2013 by promoter PICTCL. This includes 19.0 acres for SEZ and 14.5 acres for Non-SEZ. PICTCL developed the land by taking credit from the bank. The detail of Infrastructure development provision is given in Table 15.

Table 15: Infrastructure Development Provision

Sl. No.	***Type***	***Area in Acre***
1	IT SEZ Plot	19.00
2	Non SEZ –IT Park	9.40
3	Convention Centre	2.00
4	Commercial	1.70
5	Residential	1.40
Total		***33.50***

The pattern in which infrastructure would be developed is given in Table 16 in percentage.

Table 16: Infrastructure Development Pattern
(%age of area to be developed)

Year	***Yr1***	***Yr2***	***Yr3***	***Yr4***
	2010	*2011*	*2012*	*2013*
Infrastructure Development Pattern	40%	20%	20%	20%

7.2 Cost and its Phasing: Land Acquisition was done in the financial year 2010. Based on technical details an estimation of capital expenditure was made. The capital cost of the project is inclusive of cost of land acquisition and its development, and infrastructure provision. The land acquisition cost is INR 0.6 million per acre. Brief detail of capital cost is given in Table 17.

Table 17: Project Cost and Phasing of Land
(INR in million)

Sl. No.	***Items***	***Total***
1	Land Acquisition cost for total area of 46.8 acres	28.00
2	Infrastructure Development cost	226.70
TOTAL		***254.70***

7.3 Debt-Equity Model: Here, a debt-equity model on 2:1 pattern was assumed to develop the project, which means the debt to be incurred is twice of the equity to be raised from the market. Thus, in 7 years period of 2010-2016 the total debt to be raised accordingly would be 169.8 million INR and total

equity to be raised would be 84.9 million INR. The total interest @12% per annum to be paid during this period would be 60 million INR. The financial analysis was carried out under certain assumptions presented in Table 18.

Table 18: Assumptions of Debt-Equity Model

Sl. No.	***Items***	***Assumptions***
1	Debt -Equity	2:1
2	Interest rate	12%
3	Moratorium	1 year
4	Loan Repayment Period	7 years.
5	Land Acquisition	1 year
6	Infrastructure Development	4 years
7	Construction Cost	Nil
8	Inflation	8.5%

The debt-equity models which include the total debt for infrastructure development, principal & interest payments and equity are presented in Table 19.

Table 19: Debt-Equity Models
(In million INR)

Year	***Yr1***	***Yr2***	***Yr3***	***Yr4***	***Yr5***	***Yr6***	***Yr7***
	2010	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*
Opening Balance	0	79.2	83.0	76.8	60.4	30.2	10.1
Loans	79.2	30.2	30.2	30.2	0	0	0
Interest@12%	9.5	13.1	13.6	12.8	7.3	3.6	0
Principal Repayment	0	26.4	36.5	46.5	30.2	20.1	10.1
Closing Balance	79.2	83.0	76.8	60.4	30.2	10.1	0
Equity	39.6	15.1	15.1	15.1	0	0	0

8.0 Total Outflows and Inflows

8.1 Total Outflows: The total outflows include the expenditure incurred for land acquisition, development cost of the land and interest payments for loans. The land acquisition took place in the first year (2010). So the first year cost included the land acquisition cost of 28.1 million INR and infrastructure development cost of 90.7 million INR making a total of 118.8

million INR. There was only infrastructure development cost and interest payment in the subsequent years. The total outflows are presented in Table 20.

Table 20: Total Outflows
(In million INR)

Year	***Yr1***	***Yr2***	***Yr3***	***Yr4***	***Yr5***
	2010	*2011*	*2012*	*2013*	*2014*
Infrastructure Development Cost	118.8	45.3	45.3	45.3	0
Interest Payments	9.5	13.1	13.6	12.8	72.5
Total Outflows	*128.3*	*58.4*	*58.9*	*58.1*	*72.5*

8.2 Total Inflows: Total inflows include income from leased of developed land.

The land will be leased to the selected developers on a 99-years lease in the pattern given in Table 21.

Table 21: Land Allocation Pattern
(Area in %)

Sl. No.	***Land Allocation Pattern***	***2010***	***2011***	***2012***	***2013***
SEZ Area					
1	IT SEZ Plot	15%	25%	30%	30%
Non-SEZ Area					
2	Non SEZ -IT Park	15%	25%	30%	30%
3	Convention Centre	15%	25%	30%	30%
4	Commercial	15%	25%	30%	30%
5	Residential	15%	25%	30%	30%

Thus, break-up of the area to be leased in the pattern mentioned above is given below in Table 22.

Table 22: Break up of Land Allocation Pattern
(In Acre)

Sl. No.	***Land Allocation Pattern***	**2010**	**2011**	**2012**	**2013**	**Total Area**
1	IT SEZ Plot	2.85	4.75	5.70	5.70	19.00
2	Non SEZ -IT Park	1.41	2.35	2.82	2.82	9.40
3	Convention Centre	0.30	0.50	0.60	0.60	2.00
4	Commercial	0.26	0.43	0.51	0.51	1.70
5	Residential	0.21	0.35	0.42	0.42	1.40
Total		*5.03*	*8.38*	*10.05*	*10.05*	*33.5*

The lease rent for financial year 2010 was fixed and is given in the Table 23. The lease rent in each succeeding year is escalated at a rate of 8.5% per annum considering the rate of inflation.

Table 23: Lease Rents
(In INR million per Acre)

Sl. No.	Area Leased	*Lease Rents*				
		2010	*2011*	*2012*	*2013*	*2014*
1	IT SEZ Plot	10.0	10.9	11.8	12.8	13.9
2	Non SEZ -IT Park	10.0	10.9	11.8	12.8	13.9
3	Convention Centre	14.5	15.7	17.1	18.5	20.1
4	Commercial	14.5	15.7	17.1	18.5	20.1
5	Residential	6.0	6.5	7.1	7.7	8.3

However, each lease rent would be collected with a break-up of 50% in the first year, 25% in the second year and the other 25% in the third year.

Table 24: Lease Rent Collection Pattern

Sl. No.	Lease Rent Collection Pattern			
1	IT SEZ Plot	50%	25%	25%
2	Non SEZ -IT Park	50%	25%	25%
3	Convention Centre	50%	25%	25%
4	Commercial	50%	25%	25%
5	Residential	50%	25%	25%

Total income (total inflow) from lease rent of 435.4 million INR collected is presented in Table 25. The total inflow in the pattern of collection presented in Table 24 is represented in Table 26.

Table 25: Total Income from Lease
(In INR million per Acre)

Sl. No.	Area Leased	*Lease Rents*				
		2010	*2011*	*2012*	*2013*	*2014*
1	IT SEZ Plot	0.0	30.9	55.9	72.8	79.0
2	Non SEZ -IT Park	0.0	15.3	27.7	36.0	39.1
3	Convention Centre	0.0	4.7	9.3	11.1	12.1
4	Commercial	0.0	4.0	7.3	9.4	10.2
5	Residential	0.0	1.4	2.5	3.2	3.5

Table 26: Total Inflows from Lease Rent
(In million INR)

Year	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*
Income from Lease of IT SEZ Plot						
	15.5	7.7	7.7	0.0	0.0	0.0
	0.0	28.0	14.0	14.0	0.0	0.0
	0.0	0.0	36.4	18.2	18.2	0.0
	0.0	0.0	0.0	39.5	19.7	19.7
Income from Lease of Non-SEZ IT Park						
	7.6	3.8	3.8	0.0	0.0	0.0
	0.0	13.8	6.9	6.9	0.0	0.0
	0.0	0.0	18.0	9.0	9.0	0.0
	0.0	0.0	0.0	19.5	9.8	9.8
Income from Convention Centre						
	2.4	1.2	1.2	0.0	0.0	0.0
	0.0	4.6	2.3	2.3	0.0	0.0
	0.0	0.0	5.6	2.8	2.8	0.0
	0.0	0.0	0.0	6.0	3.0	3.0
Income from Commercial Area						
	2.0	1.0	1.0	0.0	0.0	0.0
	0.0	3.6	1.8	1.8	0.0	0.0
	0.0	0.0	4.7	2.4	2.4	0.0
	0.0	0.0	0.0	5.1	2.6	2.6
Income from Residential Area						
	0.7	0.3	0.3	0.0	0.0	0.0
	0.0	1.2	0.6	0.6	0.0	0.0
	0.0	0.0	1.6	0.8	0.8	0.0
	0.0	0.0	0.0	1.7	0.9	0.9
Total Income (Total Inflows)	***28.2***	***65.4***	***106.0***	***130.7***	***69.1***	***36.0***

9.0 Cash Flow

9.1 Net Cash Flow: The net cash flow is the difference between total inflows and total outflows.

9.2 Net Cash Flow from Equity: The net cash flow from equity is the difference between total inflows and equity value minus principal payment minus interest payment.
The net cash flow statement is presented in Table 27.

Table 27: Net Cash Flow Statement
(In millions of INR)

Year	*Yr1*	*Yr2*	*Yr3*	*Yr4*	*Yr5*	*Yr6*	*Yr7*
	2010	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*
Net Cash Flow	-128.3	-30.3	6.4	47.8	123.5	65.5	36.0
Net Cash Flow from Equity	-49.1	-26.5	0.2	31.5	93.3	45.3	25.9

10.0 Financial Rate of Return (FIRR):

The IRR was calculated from the net cash flow statement presented in Table 27. The Project IRR was found to be 15 % and Equity IRR 28%. So both the project IRR and equity IRR were viable as it is above WB and ADB's guideline 12%.

11.0 Conclusion:

In Roopnagar IT, IT SEZ Park in option 1 in which the market rate of inflation was considered @ 10% per annum, the Project IRR estimated at 15% and Equity IRR 26%. In Option 2, where market rate of inflation was taken very low @ 2.5% per annum, the Project IRR estimated at 23% and Equity IRR 43%. In Kapurthala IT, IT SEZ Park in which the market rate of inflation was considered @ 8.5% per annum, the Project IRR estimated at 15% and Equity IRR 28%. In both the case, the financial viability was obtained. So both projects were found to be financially viable. However, for successful implementation of the project, high measures of development and marketing efforts are required by PICTCL.

REFERENCES:

Asian Development Bank, *Handbook for the Economic Analysis of Water Supply Projects*, Chapter 5.

Curry, S.,and Weiss, J., *Project Analysis in Developing Countries*, Second Edition, Palgrave Macmillan, 1999.

Jenkins, G.P., Kou, C. Y., Harberger, A.C., *Cost-Benefit Analysis for Investment Decisions*, Chapter 3, The Financial Appraisal of the Project, Development Discussion Paper, 2011-3.

Kampf, R. & Beckova, H., *Economic and Financial Analysis of Transport Projects,* University of Pardubice, Czechoslovakia, Number 4, Volume IV, December 2009.

Little, I.M.D. and Mirrllees, J.A., *Project Appraisal and Planning for Development Countries*, London: Heineman Educational Books, (1974).

Report of Third Meeting of Task Force on Infrastructure for IT/ Knowledge Industries, 30th November 2009, Punjab Infotech, Government of Punjab, India .

Savvides, S.C., *Market Analysis in Project Evaluation*, Harvard Institute for Internatio-nal Development, Development Discussion Paper, 1999.