

# Effective Public Private Partnership for Redevelopment of Government Buildings- Case Study in Nashik

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**Abstract-** India witnessed tremendous economic instability post-independence. For economic development, India adopted mixed economy and people started moving to cities. With modernization and industrialization there is ever growing number of nuclear families, in which each family splitting further, engage more number of new units of houses in urban areas. Increasing urbanization is leading to scarcity of land, housing units and commercial centers. In every new development plan, exterior of prevailing areas is brought under development which requires huge funds for infrastructure construction and its implementation. Also high cost of land, which is the consequence of a number of factors, is one of the principal challenge. The absence of a clear title is another serious problem for participation by financial institutions and real estate developers in projects of real estate. In the absence of redevelopment and densification of available lands, land remains underutilized and thus contributing to shortage of land and to high land prices. But there are many existing plots in the core of the city which can be redeveloped using PPP models for efficient use of land. So Public-Private Partnership (PPP) is right approach to address the problem in housing sector by developing different PPP models. CSF in housing sector are identified and analyzed using SPSS software and criticality of factor is determined. A case study is undertaken in Nashik city for redevelopment of government building using effective PPP model.

**Index Terms-** Public Private Partnership; SPSS; Cost analysis; Critical Success Factor.

## 1. INTRODUCTION

India faces the problem of shelter and to accommodate increasing migration of the people to urban areas for economic gains and better lifestyle as India is one of the developing country. With modernization and industrialization there is ever growing number of nuclear families, in which each family splitting further, engage more number of new units of houses in urban areas. Despite of efforts taken by private and government the shortage is increasing day by day. This problem requires huge amount of funds which cannot be handled either by private sector or government autonomously Public Private Partnership (PPP) is appropriate method to concentrate on this problem. Public Private Partnership is a contractual agreement between private firm and Government aimed towards implementing infrastructure services and facilities that were traditionally managed and provided by public sector.

## 2. METHODOLOGY

- (1) Questionnaire is prepared for identified factors and questionnaire survey is carried out amongst the Government contractors, builders, Government officials etc.
- (2) Responses collected are analyzed using SPSS software to find the mean.
- (3) Rating and ranking is given to factor according to mean values.
- (4) Cost analysis using Public Private Partnership is done for the case study

## 3. DATA COLLECTION AND DATA ANALYSIS

### 3.1. Data collection

Factors identified are collected through literature, interviews and discussion with the experts. 43 factors are collected.

### 3.2. Data analysis

The factors are analyzed using SPSS software for 87 respondents and top 10 factors are ranked.

Table 1. Descriptive Statistics

	N	MEAN
Pre-project assessment	87	3.8276
Availability of finance & its provision	87	3.8046
Audience acceptance	87	3.3103
Differences in working	87	3.0000
Poor decision making	87	2.9655
Planning & designs with approvals	87	3.4713
Applicability	87	3.3908
Public guarantee for loan	87	3.8506
Project duration	87	4.5862
Geotechnical conditions	87	3.7701
Construction technology & method	87	3.9425
Design deficiency	87	3.7126
Poor quality of workmanship	87	3.4253
Resource availability	87	3.6092
Transparent procurement process	87	3.3448
Latest technology	87	3.0460
Coordination in system within consortium	87	4.1264

Scheduling and controlling	87	4.5402
Procedures for transferring project to client	87	3.5977
Dispute resolution system	87	3.3793
Risk resolution	87	3.0690
Governing body	87	3.0115
Unstable government	87	2.1839
Legal framework	87	3.9310
Political environment	87	2.9540
Investment schedule & guarantee revenue system	87	3.8161
Guarantee	87	3.7816
Government acts ex rera	87	2.6322
Prequalification of contractor	87	4.0805
Partnership formation	87	3.8966
Delay in approvals permits	87	3.8966
Formation of clauses	87	3.9425
Inflation	87	3.7471
Price changes& tariff changes	87	3.8621
Public credit	87	3.7356
Concessionaire changes	87	4.1034
Escalation	87	3.2874
Operational cost overrun	87	4.0460
Safety consideration	87	3.8851
Assistance in ppp	87	3.2874
Force majeure	87	3.8736
Political & social support in drafting phase	87	3.5517
Good governance	87	3.8966
Valid n (listwise)	87	

Table 2. Top Ten Ranking of critical success factors

Factors	Ranks	Mean value
Project duration	R1	4.5862
Scheduling and controlling	R2	4.5402
Coordination in system within consortium	R3	4.1264
Concessionaire changes	R4	4.1034
Prequalification of contractor	R5	4.0805
Operational cost overrun	R6	4.0460
Formation of clauses	R7	3.9425
Construction technology and method	R8	3.9424
Legal framework	R9	3.9310
Partnership formation	R10	3.8966

Table 3. Rating of critical success factors according to their criticality

Mean value	Impact
0-1	Not critical
1-2	Fairly critical
2-3	Average critical
3-4	Very critical

4-5	Extremely critical
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TABLE 4. Rating of critical success factor and their numbers

CSF	Total Number
Not critical	0
Fairly critical	0
Average critical	4
Very critical	33
Extremely critical	6

#### 4. CASE STUDY IN NASHIK

##### 4.1. Siddhivinayak vasahat site

Effective PPP model for redevelopment of government of buildings on Trimbakeshwar road. This area lies in the heart of the city. There is no availability of plots in this area. This area is densely populated. Also there are government old offices and residential quarters on 45 m and 24 m road respectively. Considering these offices and quarters redevelopment is appropriate option. Redevelopment can be suggested using PPP for this location like commercial complexes and offices. Area detail of the plot to be redeveloped is 5478.55.m2

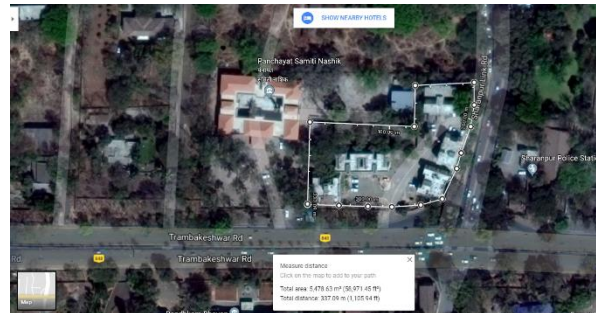


Fig. 1. Map of Siddhivinayak site

##### 4.2. Cost analysis model

Three models are prepared which includes 60%-40%, 50%-50%, and 55%-45% in which greater share is given to government and lesser share to the private entity.

The site details are as follows:

Table 5. Site details

Plot Area	5478.55	Sqm	
Basic Zonal FSI	1.10	6026.41	Sqm
Additional FSI Permissible as pre DCPR for fully	0.15	821.78	Sqm

Commercial Building			
Premium FSI permissible on Payment of Premium to Authority	0.50	2739.28	Sqm
TDR Permissible	1.40	115.00	Sqm
Total FSI		9702.46	Sqm
Total FSI (Built Up area proposed)		9702.46	Sqm

After cost calculation using the market rates in that prevailing area the following table shows the cost comparison for three models

Table 6. Cost comparison of models

Model	60%-40%		50%-50%		55%-45%	
Sector	Government	Private	Government	Private	Government	Private
Total land in area in Sqft	58965.633					
Built up area in Sqft	62707.1	41804.7	52255.9	52255.9	57481.5	47030.3
Cost of Construction in Rs	175579958.4	117053305.6	146316632	146316632	160948295.2	131684968.8
Selling price in Rs	-----	451642004	-----	550928290	-----	501285147
Profit margin in Rs	15,90,08,740		25,82,95,026		20,86,51,883	

## 5. CONCLUSION

The analyzed critical success factors are vital in redevelopment and housing sector. From the data collected a plan is proposed for redevelopment of government quarters and cost analysis for various models like 60%-40%, 50%-50%, 55%-45% is done and it is found out that the most suitable model using public private partnership is 50%-50%. It provides win-win situation for both government as well as private sector.

## Acknowledgments

With deep sense of gratitude I would like to thank all the people who have helped and enlightened my path with their guidance. Special thankfulness to Mr. P.D. Aher, Mr. R.V.Devalkar P.G .Coordinator, Dr. M.P.Kadam HOD Civil Department who guided me in

dissertation work. I'm also thankful to all government officials, engineers for their help.

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