Effective Application of PPP in Affordable Housing Project

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Abstract: In developing India, we faced the problem of shelter to accommodate growing migration of people to cities in search of employment. If housing projects are channelized properly then we provide the houses with minimum valuation i.e. Budget homes. Public private partnership is one of the solution for successful completion of affordable housing projects. However application of PPP in affordable housing project is very few and success stories are less. Therefore the aim of this paper is to identify and analyze the critical success factors for successful implementation of PPP in AH projects. A questionnaire was designed and circulated to various respondents to obtain information about various PPP projects and information is analyzed by using RII method.

Keywords: Affordable Housing Project, Public Private Partnership, Critical Success Factors, Real Estate, Project Management

I. INTRODUCTION

In developing India, we are faced with the problems of infrastructure and shelter to accommodate growing migration of the people to urban areas. There is huge shortage of houses in developing cities. This shortage is growing despite best efforts by the Government and the private sector. Problem of availability of large magnitude of funds cannot be handled either by Government or by Private Sector independently. Public-Private Partnership (PPP) is right approach to address this problem. The Public Private Partnership means a project based on concession agreement between a government authority on one side and private sector on other side for delivering services on payment of user charges. Through PPP there are various benefits such as quality of work improves with effective cost also the projects are completed without delay so directly it saves the funds.

II. LITERATURE REVIEW

The literature review aimed to review the critical points of current knowledge including substantive findings as well as theoretical and methodological contributions to this topic. It is necessary to study the literature to understand the actual concept of PPP, Affordable Housing and Critical Success Factors.

Review of technical papers:
1) L. Lakshmanan (2008),

The main focus of this paper is to provide an analytical abstract of sector wise infrastructure developments in the country and the status of private participation and the PPP in building such public infrastructure

2) Juli Ponce (2010),

The article analyzes the role of affordable housing as an element to promote social inclusion. The article concludes that public intervention should promote social mix, which could be a useful remedy for urban segregation.


Locally produced building materials and intermediate technology which can reduce construction cost by about 60 percent as an affordable strategy for construction of low cost housing in Nigeria. Utilization of local building materials and technologies most housing units produced by the Public Private Partnership (PPP) mass housing come at prices beyond the affordability limit of the target population. Direct housing construction by the government is costly; still the quality of the houses is in doubt.

4) Ogunsanmi Olabode Emmanuel (2014),

The study recommends that public agencies should develop viable and robust legal and regulatory framework for PPP implementation as well as government undertaking sufficient public awareness campaign on need to pay for use of infrastructure projects on concession.

III. PROBLEM STATEMENT AND METHODOLOGY

A. Problem Statement:

1) Shortage of housing units at affordable price.
2) Private sectors view on the inefficiencies in the housing project procurement and implementation.
3) The large scope of use of PPP model in housing projects but success of this lies in its correct way of implementation.

B. Methodology:

1) Define the problem statement with study of literature.
2) With the help of literature and discussion with experts factors will be found out for making questionnaire.
3) Preparation of questionnaire.
4) Then Questionnaire survey is carried out among the experts.
5) Finding critical success factors by using relative importance index method. Also rating will be carried out depending upon RII value.

**C. Relative Important Index:**

**Average Index Analysis**

The result will be further summarized to obtain the overall level of importance and evaluation in local construction industry. The respondent were requested to evaluate the factors which effect on total performance of construction based on five-points scale starting with 1 for not important, 2 for less important, 3 for average, 4 for important, 5 for very important. The average index analysis for which variable is calculated by:

\[
\text{Average index} = \frac{\sum X_1 + 2X_2 + 3X_3 + 4X_4 + 5X_5}{\sum X_1 + X_2 + X_3 + X_4 + X_5}
\]

Where, \(X_1 = \text{no of respondents for not important}\), \(X_2 = \text{no of respondents for less important}\), \(X_3 = \text{no of respondents for average}\), \(X_4 = \text{no of respondents for important}\), \(X_5 = \text{no of respondents for very important}\).

**Relative Index Analysis**

The respondents were requested to evaluate factors on five-points scale starting with 1 for not important, 2 for less important, 3 for average, 4 for important, 5 for very important. The relative index analysis for each variable is calculated by using:

\[
\text{Relative index} = \frac{\sum X_1 + 2X_2 + 3X_3 + 4X_4 + 5X_5}{5\sum X_1 + X_2 + X_3 + X_4 + X_5}
\]

**IV. DATA COLLECTION AND DATA ANALYSIS**

**A. Data Collection:**

A study of literature shows a number of factors that were identified by researchers in the past as critical success factors in the construction industry.

*Table No.1 Data Collected From Various Respondents*

<table>
<thead>
<tr>
<th>Code</th>
<th>General Factors (GF)</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>GF1</td>
<td>Pre-Analytical study of project</td>
<td>15</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>GF2</td>
<td>Planning and design with approvals</td>
<td>13</td>
<td>9</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>GF3</td>
<td>Funding and its provisions</td>
<td>10</td>
<td>11</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>GF4</td>
<td>Demand of project</td>
<td>6</td>
<td>5</td>
<td>9</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>GF5</td>
<td>Duration</td>
<td>6</td>
<td>2</td>
<td>10</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>GF6</td>
<td>Favorable locations</td>
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<td>3</td>
<td>8</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

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B. Data Analysis:
In this paper 37 factors are analyzed to measure the performance of projects. Relative importance index of each critical success factors was calculated and criticality of success factors decided depending on RII value.
V. RESULTS AND DISCUSSION

Result of above analysis shows top 10 factors which affects at extreme level on PPP projects. Factors are as follows, 1. Planning and design with approvals, 2. Pre-Analytical study of project, 3. Wide gap between public and private sector expectations, 4. Governing body, 5. Quality risk, 6. Funding and its provisions, 7. Legal framework, 8. Delay in land acquisition, 9. Geotechnical Conditions, 10. Operational cost over-run. This factors require special attention with the help of this one can achieve the successful PPP projects.

VI. CONCLUSION

The study help both the parties (i.e. Public and private) to identify the critical areas that affect the project performance and plan carefully to overcome such risks. With the help of identified factors project manager can apply special control according to their criticality. The study helps the parties working under housing projects to utilize their skills and resources in most effective manner.

VII. REFERENCES

4) Ogunsanmi Olabode Emmanuel, (2014), “Stakeholders perception of critical success sub-factors (CSSFs) for implementation of Public Private Partnership Project”

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