Impact Analysis of Pradhan Mantri Awas Yojana (Urban) in Chhattisgarh: A Division-Wise Performance Evaluation

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Abstract

The Pradhan Mantri Awas Yojana–Urban (PMAY-U) is a national housing initiative aimed at providing affordable and permanent housing to eligible urban households. In Chhattisgarh, the scheme has been implemented across multiple administrative divisions, each showing varying levels of progress in terms of houses sanctioned and constructed. This study presents a division-wise performance evaluation of PMAY-U in the state, focusing on implementation efficiency, construction progress, and patterns of fund disbursement. A custom-developed web-based data analysis portal was utilized to organize beneficiary records, visualize work progress, and identify administrative challenges. The analysis reveals that while Chhattisgarh has progressed significantly in achieving the PMAY-U objectives, the completion rate across all divisions is not uniform. Certain divisions, particularly those with better municipal coordination and faster approval processes, have achieved higher completion levels, whereas others continue to face delays. State-level results indicate that although the state appears to follow a positive trajectory, targeted interventions are required to address delays and ensure the timely completion of remaining units. This study highlights the importance of structured data monitoring and transparent reporting systems to strengthen implementation and support informed decision-making for future urban housing development.

Keywords: PMAY-U, Housing for All, Urban Development, Impact Analysis.

Introduction

Beyond the physical aspect, housing is one of the most basic human needs, which is essential for social security, economic stability, and a better quality of life. It is also part of the core elements of sustainable development in both urban and rural settings. The rapid growth of the population, migration, and increasing costs of land have increased the demand for affordable housing in Indian urban cities, especially among the economically weaker sections and low-income groups. The Government of India, to meet the increasing demand, launched the Pradhan Mantri Awas Yojana - Urban (PMAY-U) in 2015, based on the concept of "Housing for All." The aim of the program is to make sure that each eligible urban household has a pucca house by providing financial assistance in the form of subsidies and credit-linked loans. PMAY-U operates through four main components: In-Situ Slum Redevelopment (ISSR), the Credit-Linked Subsidy Scheme (CLSS), Affordable Housing in Partnership (AHP), and Beneficiary-Led Construction (BLC). Each component addresses distinctive beneficiary needs and urban housing situations, hence making the scheme applicable across different socio-economic settings.

One of the main beneficiaries of PMAY-U has been Chhattisgarh, a state with a considerable rural population, together with rapidly urbanizing cities. Many cities like Raipur, Bilaspur, Durg, Rajnandgaon, and Korba have seen the sanctioning and construction of many housing units under the scheme. However, the pace of progress, the effectiveness of implementation, and overall impact vary across divisions. While some divisions have shown consistent progress in terms of construction and beneficiary satisfaction, others face delays, incomplete works, or challenges in the identification and mobilization of eligible beneficiaries.

The impact and performance assessment of PMAY-U across divisions in Chhattisgarh will be useful to understand the extent the scheme has assisted in upgrading urban living conditions and mitigating housing challenges. Beyond infrastructure provision, the scheme also influences access to basic amenities such as sanitation, electricity, clean water, and waste management that together add to enhanced socio-economic well-being.

This study undertakes a division-wise performance analysis of PMAY-U in Chhattisgarh, taking into consideration the key indicators such as sanctioned houses, construction progress, completed houses, and financial disbursement patterns. The study integrates government data with performance evaluation methodologies to explain achievements and implementation challenges. The findings are expected to provide policy improvements toward equitable urban development across the state and contribute to a clearer understanding of how PMAY-U is shaping urban development in Chhattisgarh.

Review of Literature

One of the long-lasting developmental issues of India is that of affordable housing. This is especially the case for people with low income and vulnerable groups in the areas witnessing rapid urbanization. To address this issue, there have been many housing initiatives in the past, such as the Indira Awas Yojana (IAY), which extended access to housing. But these initiatives suffered from various flaws, such as funding gaps, poor quality control, and irregular implementation. These flaws emphasized the need for a more integrated and all-inclusive national response [1]. This realization led to the creation of policies that are better suited to address the shortage of urban housing, rural-to-urban migration, and the needs of economically weaker sections who want better living standards [2]. Wider discussions on affordable housing suggest that barriers on both the supply and demand sides, such as the lack of serviced land and the unaffordability of the available ones, make equitable housing access difficult. Hence, considerable reforms in planning, financing, and governance are required to address these challenges [3].

The introduction of the PMAY heralded a systemic, inclusive, and economically endowed housing policy. Studies on beneficiary satisfaction in regard to PMAY reveal that socio-economic factors like age, education, and occupation are strong determinants for beneficiaries' perceptions about the scheme's outcomes. Many studies documented improvements in housing quality and amenities, at the same time noting differences across demographic subgroups [4]. In-situ slum redevelopment, as actually envisaged under PMAY-Urban, has been found to improve infrastructure, community facilities, and living conditions in upgraded settlements located at their original sites, especially when adequately supported by amenities and social development programs [5].

Financial inclusion continues to be a key factor in the implementation of PMAY, particularly for the recipients who depend on timely economic benefits for completing construction. Evidence from evaluations of rural PMAY itself indicates overall satisfaction among beneficiaries with the assistance provided, though certain gaps persist in accessing basic services and formal mechanisms of financing [6]. Wider rural evaluations of PMAY further confirm that timely disbursements, covering landless households, and convergence with other welfare programs are all fundamental for achieving true improvement in housing quality and stability in the long run [7].

Apart from programmatic evaluation, methodological advances have also been made to expand the assessment frameworks of PMAY. One such study designed and validated a 50-item scale to assess the socio-economic impact that identified dimensions like housing quality, social inclusion, and behavioral intention. The development of such refined tools supports rigorous policy evaluation [8]. These together point towards an increased interest in systematic approaches to understanding the outcomes of PMAY. The national-level analyses trace the evolution of housing policy in India, wherein fragmented programs have progressively given way to coherent strategies like PMAY, which addresses the needs of Economically Weaker Sections (EWS), Lower and Middle-Income Groups (LIG), and Middle-Income Groups (MIG) in both rural and urban contexts [9]. Overall, the literature recognizes PMAY as a transformative intervention while also highlighting regional disparities, administrative bottlenecks, and the need for improved monitoring systems. These studies strengthen the reason for division-wise performance analysis in states like Chhattisgarh in order to explain variations in achievement and to guide future implementation.

Methodology

This section describes the quantitative methodology used to evaluate the division-wise implementation performance of the Beneficiary-Led Construction (BLC) component under the Pradhan Mantri Awas Yojana-Urban (PMAY-U) in the state of Chhattisgarh. The analysis is entirely based on official administrative data and results generated through a web-based analytics portal developed for this study.

A. Research Design

The study adopts a quantitative, cross-sectional, descriptive-comparative research design. This design is appropriate for measuring and comparing implementation performance across administrative divisions using numerical indicators derived from official records. The analysis represents a single-time-point assessment of housing progress to identify inter-divisional variation in PMAY-U BLC implementation.

B. Data Source

The analysis is based exclusively on the official administrative dataset titled "BLC Component Progress as on 23-Sep-2025", covering all Urban Local Bodies (ULBs) across divisions in Chhattisgarh. The dataset includes the following fields:

- **Geographical identifiers: Division Name**, ULB Name
- **Numerical progress variables:**
  Sanctioned Dwelling Units, Houses at Foundation Stage, Lintel Stage, Roof Stage, Houses in Progress, Completed Houses, Total Geo-tagged Houses, Not Started Houses
- **Derived variable**: Completed vs Sanctioned (%)

This dataset represents the government-reported implementation status of the BLC component at the specified reference date.

C. Data Preparation and Processing
The dataset was processed using a custom web-based analytics portal developed with HTML, CSS, JavaScript, and the PapaParse library. Data preparation involved the following steps:

1. The CSV file was loaded and parsed by assigning the second row of the file as the header row, while all subsequent rows were treated as data records. Text fields were trimmed to remove leading and trailing whitespace.
2. Numerical values containing comma separators were converted to numeric format for computation.
3. The division identifier column was automatically detected by matching common administrative naming patterns.
4. Records were first filtered by the selected division, after which ULB-level numerical values were aggregated through summation to compute division-level statistics.

D. Performance Indicators
The analytics portal computes and displays the following division-level performance indicators:
- **Total ULBs:** Number of ULB records within a division
- **Total Sanctioned Houses:** Sum of sanctioned dwelling units
- **Total Completed Houses**: Sum of completed houses
- **Houses In Progress**: Difference between sanctioned and completed houses
- **Completion Rate (%):**

$$\text{"Completion Rate (\%)"} = (\text{"Completed Houses"} / \text{"Sanctioned Houses"}) \times 100$$

These indicators are computed dynamically for each selected division and form the primary quantitative basis of performance comparison.

E. Analytical Procedure
The analytical workflow follows a structured sequence implemented within the portal:
1. Load and parse the administrative CSV dataset
2. Detect and populate the division selection control
3. Filter records by selected division
4. Apply progress-based filters (completed, in-progress, not started, and completion-percentage ranges)
5. Aggregate division-level statistics and compute indicators
6. Display results through summary statistics and detailed tables

Divisions are compared based on their computed completion performance and progress distribution.
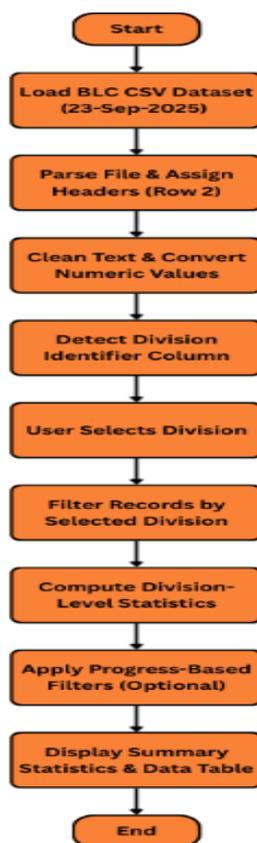
Figure 1: Workflow Diagram

F. Validation and Reliability

Result validity was assessed through internal consistency checks:

- Computed Completion Rate values were cross-verified with the "Completed vs Sanctioned (%)" field present in the dataset.
- Aggregated division totals were checked for consistency before and after filtering.
- Record counts were verified across different progress categories to ensure data integrity.

These steps confirm the reliability of the computed indicators.

G. Scope of the Study

The scope of this study is limited to a division-wise quantitative evaluation of the BLC component of PMAY-U in Chhattisgarh, using administrative data reported as of 23-Sep-2025. The analysis focuses exclusively on construction progress and completion performance derived from official records and does not extend to beneficiary surveys, financial analysis, or other PMAY-U verticals.

Results & Discussion

Table 1 Division-wise Performance Summary of PMAY-U in Chhattisgarh

TABLE 1: DIVISION-WISE PERFORMANCE SUMMARY OF PMAY-U IN CHHATTISGARH

Division Name	Sanctioned Houses	Completed Houses	In Progress	Not Started	Completion Rate (%)
Bastar	14,993	13,162	1,773	58	88%
Bilaspur	58,488	51,515	6,834	139	88%
Durg	65,139	62,165	2,884	90	95%
Raipur	45,816	43,731	2,002	83	95%
Sarguja	21,682	17,220	4,407	55	79%
Total	**2,06,118**	**1,87,793**	**17,900**	**425**	**91%**

Results:

- Chhattisgarh has achieved significant progress under PMAY-U's Beneficiary-Led Construction section. Table 1 presents division-wise figures indicating that the state has completed 187,793 units from a total of 206,118 sanctioned units, revealing a 91 percent completion rate.
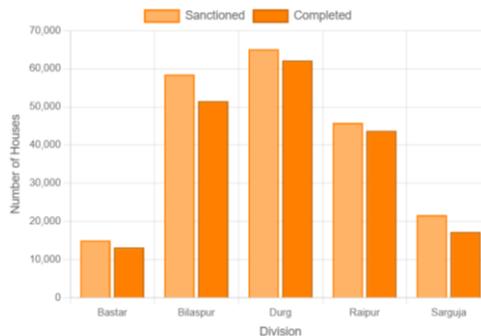

Figure 2: Division-wise Sanctioned vs Completed Houses

- Figure 2 represents the comparison between sanctioned and completed houses across divisions where, Durg leads with 62,165 completed houses out of 65,139 sanctioned houses(95% completion), followed by Raipur at 43,731 out of 45,816 (approximately 95%). Bilaspur completed 51,515 of 58,488 units (88%), Bastar finished 13,162 of 14,993 (88%), while Sarguja completed 17,220 of 21,682 houses (79%).
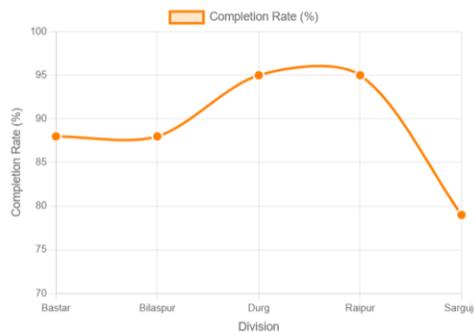

Figure 3: Division-wise Completion Rate Comparison (%)

- Figure 3 shows the division-wise completion rate differences, highlighting a 16-percentage-point gap between the highest and lowest performing divisions, which reveals significant operational differences.
- Sarguja has more than 20 percent of approved houses underway, while Bastar and Bilaspur each have approximately 11 percent, and both Durg and Raipur are below 5 percent. Not-started units constitute about 0.21 percent statewide, showing minimal project delays.
- Stage-wise distribution helps to understand at which stages the delays are happening. Foundation and lintel stages of construction in Sarguja are where most of the concentration is found, while Bilaspur and Bastar have moderate accumulation at intermediate phases. Durg and Raipur have very little stage-wise buildup, indicating a smooth construction flow. The coverage of geo-tagging is still very good at 99.79 percent in all divisions.

Discussion:

- These results confirm that our method of quantitatively measuring performance implementation is sound. The 91 percent completion across the state is a clear indication that the program was delivered in an effective manner, whereas the comparison of the divisions brings out the significant insights.
- Durg and Raipur achieved 95 percent completion rates, showing strong administrative coordination, fast approvals, and good contractor management. The low number of ongoing tasks and minimal delays suggest the work was efficient and resources were used on time.
- Sarguja's difficulties are met mainly during the construction phase, where minimal issues are observed at the project's initial stage. Rough landscape, remote villages, limited contractor availability, and delivery problems create the work delays seen in unfinished construction at the foundation and lintel stages. These challenges come from on-ground conditions rather than poor planning.

- Bilaspur handles the largest workload but still observes an 88% completion rate, which shows strong management. But the Ongoing work highlights the need for closer stage-wise monitoring. Similar obstacles, like difficult terrain and infrastructure limitations, exist in Bastar, which continue to affect progress.
- Beneficiary identification and project approval processes work effectively, as evidenced by the consistently low not-started ratios across divisions. The digital monitoring mechanisms under PMAY-Urban have shown reliability. Nearly all units now have geo-tagging, which enhances transparency and strengthens accountability.
- Successful divisions hold important insights that suggest systematic study and greater acceptance. Yet struggling divisions need something different, which is concentrated assistance addressing on-ground obstacles, better contractor access, improved logistics coordination, and geography-appropriate techniques that can bridge the gap. The data support this approach. Division-specific, evidence-based methods present the optimal framework for achieving consistent PMAY-Urban results statewide.

Conclusion

This research provides a numerical, scheme-based evaluation of the effectiveness of the execution of the Beneficiary-Led Construction scheme by the Chhattisgarh government, under the Pradhan Mantri Awas Yojana–Urban. The study offers a description of the housing development status by combining data at the Urban Local Body level and looking at implementation criteria.

According to the report, Chhattisgarh has achieved a 91% total completion rate, indicating good development. Due to strong organizational alignment and effective operational arrangements, the Durg and Raipur divisions exhibit high physical progress with a 95% completion rate. Despite having the highest percentage of sanctioned homes, Bilaspur is also demonstrating 88% physical improvement, which indicates some administrative scalability.

Sarguja, on the other hand, had a 79% completion rate, indicating ongoing problems with infrastructure, location, and construction. The analysis also finds that very few not-started houses have been found in all divisions and indicates that the determination of beneficiary identification and program initialization was highly successful. This increase in home construction indicates that implementation and planning are the issues.

This almost complete coverage of geo-tagging confirms the success of digital monitoring at the division level. As an overall research tool, the research is recommended at a focused level, focused on targeted initiatives to alleviate regional divides and achieve, on time, and fair urban housing provision in Chhattisgarh.

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