

## **AFFORDABLE HOUSING UNDER JNNURM SCHEME: AN EMPIRICAL STUDY BASED ON IMPORTANCE PERFORMANCE ANALYSIS MATRIX**

**Dr. Rajesh R. Desai<sup>\*</sup> & Dr. Chetan C. Patel<sup>†</sup>**

---

### **Abstract**

*The focus of this paper is to evaluate the performance of affordable housing under Jawaharlal Nehru National Urban Renewal Mission (JNNURM). In this research, the Importance-Performance Analysis (IPA) grid was used to measure the performance of affordable housing from the beneficiaries' perspective. A list of 48 facility criteria was identified from Surat Municipal Corporation (SMC) and each of the facility criteria was rated using a five point Likert scale. On a five point Likert scale, the survey enables the beneficiaries to rate the relative importance of the facility criteria, followed by another facility criteria performance rating. The purpose of the survey is not only to measure the actual satisfaction level, but also to highlight important areas for improvements. The results are useful in identifying areas for strategic focus to help official to improve certain area.*

**Keywords:** *Importance-Performance Analysis Matrix, JNNURM, SMC*

---

### **1. Introduction**

The Importance-Performance Analysis (IPA) is widely used because it is an effective technique for practitioners to evaluate an existing strategy, identify improvement priorities for service attributes, and develop new effective

---

<sup>\*</sup> Assistant Professor, Ambaba Commerce College, MIBM & DICA-Sabargam, Gujarat, India, E-mail id: rajeshdesai1583@gmail.com

<sup>†</sup> Assistant Professor, Ambaba Commerce College, MIBM & DICA-Sabargam, Gujarat, India, E-mail id: yug28patel@gmail.com

marketing strategies (Hansen & Bush, 1999). IPA is a popular tool for formulating a management strategy as it is simple, intuitive and does not require much knowledge of statistical techniques (Taplin, 2012). Importance Performance Analysis (IPA) is a powerful evaluation tool for practitioners and academics to find out attributes that are doing well and attributes that need to be improved, which require actions immediately. In short, this IPA evaluation tool is used to prescribe the prioritisation of attributes for improvement and it can also provide guidance for strategic development. IPA has been applied in profile marketing (Crompton & Duray, 1985), manufacturing (Platts & Gregory, 1992), the Importance-Performance Analysis (IPA) grid was used to measure the performance of affordable housing from the beneficiaries' perspective. A list of 48 facility criteria was identified from Surat Municipal Corporation (SMC) and each of the facility criteria was rated using a five point Likert scale. On a five point Likert scale, the survey enables the beneficiaries to rate the relative importance of the facility criteria, followed by another facility criteria performance rating.

The purpose of the survey is not only to measure the actual satisfaction level, but also to highlight important areas for improvements. The IPA, a two-dimensional grid, is broken into four categories like Concentrate Here, Keep up the Good Work, Low Priority, and Possible Overkill to enable each of the satisfaction to be plotted into the grid. It is a clear and powerful evaluation tool for the official of the affordable housing under JNNURM to find out attributes that are doing well and attributes that need to be improved, which require action immediately. The two dimensional IPA model is divided into four quadrants with performance on the x-axis and importance on the y-axis. As a result of this, four quadrants namely concentrate Here, Keep up the Good Work, Low Priority, and Possible Overkill is created. The quadrants can be used to generate suggestions for official of affordable housing. Quadrant I (High Importance but Low Performance) is labelled Concentrate Here. The attributes that fall into this quadrant represent key areas that need to be improved with top priority. Quadrant II (High Importance and High Performance) is labelled Keep up

the good work. All attributes that fall into this quadrant are the strength and pillar of the organisations, and they should be the pride of the organisations. Quadrant III (Low Importance and Low Performance) is labelled Low Priority. Thus, any of the attributes that fall into this quadrant are not important and pose no threat to the organisations. Quadrant IV (Low Importance but High Performance) is labelled as Possible Overkill. It denotes attributes that are overly emphasized by the organisations; therefore, organisations should reflect on these attributes, instead of continuing to focus in this quadrant, they should allocate more resources to deal with attributes that reside in quadrant I.

## **2. Review of Literature**

Martilla and James (1977) investigated automotive services and used importance-performance analysis (IPA) to develop corporate strategies. They integrated the analysis of two dimensions (importance and performance) to evaluate quality attributes that were crucial to customers but did not result in the expected performance and thus needed to be improved.

Parasuraman (1985) opines that the IPA has in fact been around for forty years. It is actually largely grounded in service theories which focus on methods for measuring and interpreting service quality/performance and gaps.

According to Shieh & Wu (2009) Service attributes displayed in these quadrants help managers to identify areas with effective performance and prioritize areas needing improvement. The two dimensional IPA model is divided into four quadrants with performance on the x-axis and importance on the y-axis. As a result of this, four quadrants namely Concentrate Here, Keep up the Good Work, Low Priority, and Possible Overkill are created.

## **3 Methodology**

Quantitative approaches adopted for the study. In quantitative approach a survey was conducted to measure the satisfaction level of the beneficiaries/buyers of the affordable houses. For present research work, secondary as well as primary data was used. Beneficiary's survey was conducted through self-administered structured questionnaire. Questionnaire was prepared by using likert scale question that is five point scales. On a five point Likert scale, the survey enables the beneficiaries to rate the relative importance of the facility criteria, followed by another facility criteria performance rating. For the beneficiaries of JNNURM affordable housing, the sample size was 485 which is 1% of the total affordable housing allocated under JNNURM scheme. In this study researcher used non-probability sampling technique. In non-probability, quota sampling method and within quota sampling, convenience sampling was used for the survey of beneficiaries of JNNURM scheme of affordable housing where the scheme is being implemented by Surat Municipal Corporation (SMC). Scope of the study limited to Surat city in Gujarat State only. Importance Performance Analysis Matrix tool was used to analyse data. This is a small part extracted from author's Ph.d thesis.

#### **4 Objectives of the study**

- To know that official should concentrate on which elements to improve performance
- To know the elements that are being performed well under JNNURM scheme
- To know the elements that are low importance as per beneficiaries

#### **5 Importance- Performance Analysis Matrix Evaluation**

**Table 1: Beneficiaries Importance and Performance Rating criteria for Affordable Housing**

<b>Factor Code</b>	<b>Facility Criteria</b>	<b>Mean Actual Performance</b>	<b>Mean Importance Criteria</b>	<b>Actual-Importance (A-I)</b>
1	Adequate plumbing facilities	2.51	4.37	-1.86
2	Continuous electrification facilities	4.07	4.57	-0.5
2a	Adequate number of electric point	3.08	3.93	-0.85
2b	Reasonable quality material used for cabling	3.55	3.99	-0.44
3	Adequate Pucca Surrounding Pavement	2.82	4.35	-1.53
4	Adequate drainage facilities	3.80	4.45	-0.65
5	Kitchen facilities	2.61	4.60	-1.99
5a	Adequate loft in Kitchen	2.14	4.15	-2.01
5b	Good quality wash basin facility	2.24	4.18	-1.94
5c	Kota stone platform in kitchen with glazed tile dado	3.01	4.14	-1.13
6	Toilet facilities	2.21	4.77	-2.56
6a	Glazed tiles flooring 2 dado in toilet	2.39	4.14	-1.75
6b	Reasonable good material of commode	2.99	4.27	-1.28
7	24 hours water supply network	2.58	4.66	-2.08
8	Underground & Overhead tank with pump	3.88	4.31	-0.43
9	Surrounding pucca road facilities	3.47	4.65	-1.18
10	Compound wall with entry gate facilities for feeling safety	4.04	4.49	-0.45
11	Adequate number of	2.22	4.22	-2

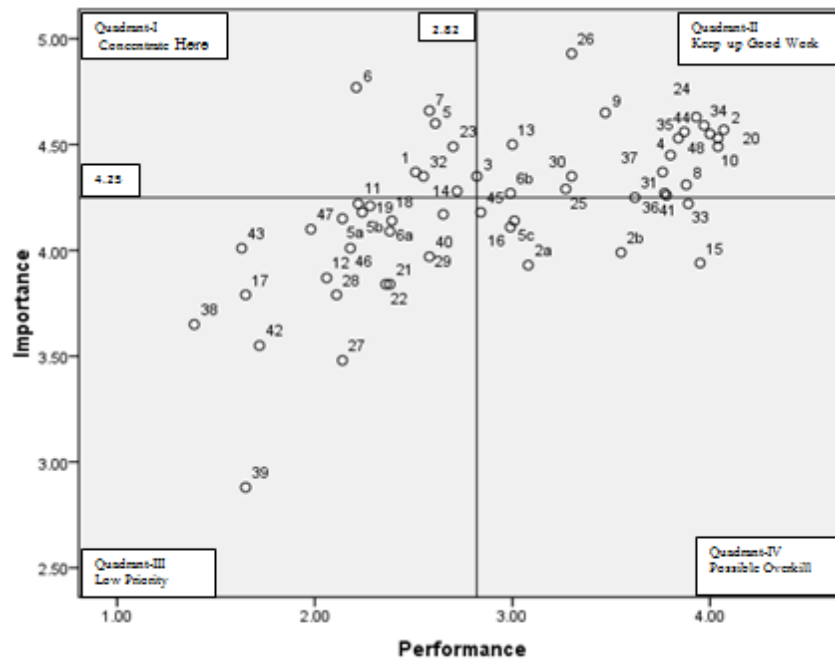
	streetlight			
12	Pleasant environment & facilities at garden	2.06	3.87	-1.81
13	Reasonable raw material used for construction	3.00	4.50	-1.5
14	Easily accessible location of house	2.72	4.28	-1.56
15	Accommodation and sufficient space in community hall	3.95	3.94	0.01
16	Tree plantation for green atmosphere and feeling of happiness	2.99	4.11	-1.12
17	Sufficient space available for all games within the play ground	1.65	3.79	-2.14
18	Bath-room with separate balcony	2.38	4.09	-1.71
19	Multi utility centre with all social facilities	2.28	4.21	-1.93
20	Nearness to vegetable Market	4.04	4.53	-0.49
21	Adequate anganwadis facilities	2.38	3.84	-1.46
22	Adequate balwadis facilities	2.36	3.84	-1.48
23	Adequate parking facilities	2.70	4.49	-1.79
24	Adequate storm drains facilities	3.93	4.63	-0.7
25	Nearness shop	3.27	4.29	-1.02
26	Health center with latest devices, technologies and medical equipment	3.30	4.93	-1.63
27	Gujarati medium primary school	2.14	3.48	-1.34
28	Other medium school (Imparting education in Marathi, Urdu, Telugu, Hindi, and Udiya etc.	2.11	3.79	-1.68
29	Secondary school	2.65	4.17	-1.52

30	Reasonable earth quake proof R.C.C. frame structure	3.30	4.35	-1.05
31	Adequate water proofing on terrace	3.62	4.25	-0.63
32	Ceramic tiles flooring with reasonable quality of material	2.55	4.35	-1.8
33	Easily access to credit-linked subsidy scheme	3.89	4.22	-0.33
34	Easily access to loan facilities	3.97	4.59	-0.62
35	Solid waste collection & disposal system	3.84	4.53	-0.69
36	Adequate size of carpet area of house	3.77	4.27	-0.5
37	Adequate size of built-up area of house	3.76	4.37	-0.61
38	Solar system facilities to improve living standard	1.39	3.65	-2.26
39	Ghodiya Ghar facilities for social benefit	1.65	2.88	-1.23
40	Good atmosphere and adequate number of books in library	2.58	3.97	-1.39
41	Affordable maintenance cost	3.78	4.26	-0.48
42	Gym facilities with adequate instruments	1.72	3.55	-1.83
43	Elevator facilities to improve living standard	1.63	4.01	-2.38
44	Water purifiers with clean drinking water	3.87	4.56	-0.69
45	Easily access to credit	2.84	4.18	-1.34
46	Adequate security facility	2.18	4.01	-1.83
47	Adequate entry gate security	1.98	4.10	-2.12

48	Well-connected transport facilities	4.00	4.55	-0.55
----	-------------------------------------	------	------	-------

According to the above table, the facility criteria item with the highest mean of importance was 4.93 that is Health center with latest devices, technologies and medical equipment (code 26); while the lowest mean of importance was 2.88 that is Ghodiya Ghar facilities for social benefit (code 39). The highest mean of performance was 4.07 that are Continuous electrification facilities (code 2); while the lowest was 1.39 that is Solar system facilities to improve living standard (code 38).

**Figure 1: Importance-Performance Analysis Matrix**



- i. Quadrant I (Concentrate Here) include elements are: Adequate plumbing facilities (code-1), Adequate Pucca Surrounding Pavement (code-3), Kitchen facilities (code-5), Toilet facilities (code-6), 24 hours water supply network (code-7), Adequate number of streetlight (code-11), Easily accessible location of house (code-14), Adequate parking facilities (code-23), and Ceramic tiles flooring with reasonable quality of material (code-32).



The official of affordable housing under Jawaharlal Nehru National Urban Renewal Mission (JNNURM) should concentrate on improving the performance of these facility criteria.

ii. Quadrant II (Keep up Good Work) include elements are: Continuous electrification facilities (code-2), Adequate drainage facilities (code-4), Reasonable good material of commode (Tub of the toilet) (code-6b), Underground & Overhead tank with pump (code-8), Surrounding pucca road facilities (code-9), Compound wall with entry gate facilities for feeling safety (code-10), Reasonable raw material used for construction (code-13), Nearness to vegetable Market (code-20), Adequate storm drains facilities (code-24), Nearness shop (For purchasing stuff, shopping etc.) (code-25), Health center with latest devices, technologies and medical equipment (code-26), Reasonable earth quake proof R.C.C. frame structure (code-30), Adequate water proofing on terrace (code-31), Easily access to loan facilities (code-34), Solid waste collection & disposal system (code-35), Adequate size of carpet area of house (code-36), Adequate size of built-up area of house (code-37), Affordable maintenance cost (code-41), Water purifiers with clean drinking water (code-44), and Well-connected transport facilities (code-48). These are importance service elements that are being performed well and the official of the affordable housing under Jawaharlal Nehru National Urban Renewal Mission (JNNURM) need to maintain the high performance.

iii. Quadrant III (Low Priority) include elements are: Adequate loft in Kitchen (code-5a), Good quality wash basin facility (code-5b), Glazed tiles flooring 2 dado in toilet (code-6a), Pleasant environment & facilities at garden (code-12), Sufficient space available for all games within the playground (code-17), Bath-room with separate balcony (Wash facility) (code-18), Multi utility centre with all social facilities (code-19), Adequate anganwadis facilities (code-21), Adequate balwadis facilities (code-22), Gujarati medium primary school (code-27), Other medium school (Imparting education in Marathi, Urdu, Telugu, Hindi, and Udiya etc.(code-28),

Secondary school (code-29), Solar system facilities to improve living standard (code-38), Ghodiya Ghar facilities for social benefit (code-39), Good atmosphere and adequate number of books in library (code-40), Gym facilities with adequate instruments (code-42), Elevator facilities to improve living standard (code-43), Adequate security facility (code-46), and Adequate entry gate security (code-47). These elements are labelled Low Priority. Thus, any of the attributes that fall into this quadrant are not important and pose no threat to the affordable housing facility.

iv. Quadrants IV (Possible Overkill) include elements are: Adequate number of electric point (code-2a), Reasonable quality material used for cabling (code-2b), Kota stone platform in kitchen with glazed tile dado (code-5c), Accommodation and sufficient space in community hall (code-15), Tree plantation for green atmosphere and feeling of happiness (code-16), Easily access to credit-linked subsidy scheme (code-33), and Easily access to credit (code-45). It denotes attributes that are overly emphasized by the official of the affordable housing; therefore, official of affordable housing under Jawaharlal Nehru National Urban Renewal Mission (JNNURM) should reflect on these attributes, instead of continuing to focus in this quadrant, they should allocate more resources to deal with attributes that reside in quadrant I.

## **6) Result and Discussion**

According to the Importance and Performance Rating criteria for Affordable Housing, the facility criteria item with the highest mean of importance was 4.93 that is Health center with latest devices, technologies and medical equipment, while the lowest mean of importance was 2.88 that is Ghodiya Ghar facilities for social benefit. The highest mean of performance was 4.07 that is Continuous electrification facility, while the lowest was 1.39 that is Solar system facilities to improve living standard. The SMC authorities should take care of these facilities in their projects.

Officials of JNNURM scheme should concentrate on Adequate plumbing facilities, Adequate Pucca Surrounding Pavement, Kitchen facilities, Toilet facilities, 24 hours water supply network, Adequate number of streetlight, Easily accessible location of house, Adequate parking facilities, and Ceramic tiles flooring with reasonable quality of material. Toilet and water are basic amenities. SMC has fared badly in providing these facilities. For better hygiene, central government also focuses on better toilet facilities through Swachh Bharat Abhiyan Mission. The official of the affordable housing under JNNURM scheme should concentrate to improve these facilities with top priority. Kitchen is an area where the SMC needs to improve upon. These are basic facilities which are costly and used frequently. Material used for their construction needs to be of standard quality so that the upkeep is easy. SMC could do better in these aspects.

Some of the importance elements that are being performed well under JNNURM scheme are Continuous electrification facilities, Adequate drainage facilities, Reasonable good material of commode, Underground & Overhead tank with pump, Surrounding pucca road facilities, Compound wall with entry gate facilities for feeling safety, Reasonable raw material used for construction, Nearness to vegetable Market, Adequate storm drains facilities, Nearness shop, Health center with latest devices, technologies and medical equipment, Reasonable earth quake proof R.C.C. frame structure, Adequate water proofing on terrace, Easily access to loan facilities, Solid waste collection & disposal system, Adequate size of carpet area of house, Adequate size of built-up area of house, Affordable maintenance cost, Water purifiers with clean drinking water, and Well-connected transport facilities. These are importance service elements need to maintain the high performance.

Some of the elements that are overly emphasized by the official under JNNURM scheme are Adequate number of electric point, Reasonable quality material used for cabling, Kota stone platform in kitchen with glazed tile dado, Accommodation and sufficient space in community hall, Tree

plantation for green atmosphere and feeling of happiness, Easily access to credit-linked subsidy scheme, and Easily access to credit. It denotes attributes official of affordable housing under Jawaharlal Nehru National Urban Renewal Mission (JNNURM) should reflect on these attributes, instead of continuing to focus in this quadrant, they should allocate more resources to deal with attributes that reside in concentrate here.

Any of the attributes that fall into Low Priority are not important and pose no threat to the affordable housing facility. Keep up Good Work are importance service elements that are being performed well and the official of the affordable housing under Jawaharlal Nehru National Urban Renewal Mission (JNNURM) need to maintain the high performance. The official of affordable housing under Jawaharlal Nehru National Urban Renewal Mission (JNNURM) should concentrate on improving the performance of Concentrate Here facility criteria.

### **References**

1. Crompton, J., & Duray, N. 1985. An Investigation of the Relative Efficacy of Four Alternative Approaches to Importance-Performance Analysis, *Academy of Marketing Science*, 13(4), 69-80.
2. Hansen, E., & Bush, R. 1999. Understanding customer quality requirements: model and application. *Industrial Marketing Management*, 28(2), 119-130.
3. Martilla J. A. & James J. C. 1977. Importance-performance analysis. *The journal of marketing*. 77-79.
4. Parasuraman, A., Zeithaml, V. & Berry, L. 1985. A conceptual model of service quality and its implications for future research, *Journal of Marketing*, 40-50.
5. Platts, K., & Gregory, M. 1992. A Manufacturing Audit Approach to Strategy Formulation in C.A.Voss (Ed.) *Manufacturing Strategy*. London, Chapman & Hall, 31-34.

Administrative Development: A Journal of HIPA, Shimla. Volume VII (2), 2020. 321

6. Shieh, J. & Wu, H. 2009. Applying importance-performance analysis to compare the changes of a convenient store. *Qual Quant*, 43(3),391-400.
7. Taplin, R. 2012. Competitive importance analysis matrix of an Australian wildlife park. *Tourism management*, 33(1), 29-37.