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Measuring Urbanity in Census Town: A Case Study of Panuhat, East Bardhaman, West Bengal

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Abstract: ***The level of urbanization in India has been experiencing an accelerated growth trajectory since 2001, primarily due to the emergence of numerous Census Towns resulting from the reclassification of rural settlements into Urban Local Bodies (ULBs). Although these Census Towns qualify as urban areas, they remain under the administrative jurisdiction of panchayats, wherein the residents frequently lack access to the comprehensive civic amenities characteristic of urban environments. This research endeavor aims to quantitatively assess the urbanity of these Census Towns through the lens of Panuhat. A robust performance analysis methodology has been employed to evaluate the operational efficacy of the Gram Panchayat. The study results indicate pronounced disparities in service delivery and infrastructure development, underscoring the imperative for targeted interventions designed to improve the living standards of inhabitants in these evolving regions.***

Keywords: census town, Gram Panchayet, urban local body, urbanity, performance analysis

1. Introduction

The elevated rate of urbanization in India is not primarily attributable to the migration of individuals from rural to urban areas; instead, it is a consequence of the 'morphing of places' from rural classifications to urban designations (Mukhopadhyay, 2017). As per the 2011 census data, the level of urbanization in India escalated from 27.8% in 2001 to 31.2% in 2011 (Mukhopadhyay, Zerah, Samanta, Maria, 2016). This phenomenon is indicative of the proliferation of census towns (CTs), which saw a threefold increase from 1362 in 2001 to 3894 in 2011. Numerous villages have been reclassified as urban local bodies. Approximately one-third of the newly established CTs are situated near existing Class I towns, while the remainder exist either in isolation or as part of clusters of smaller rural settlements (Mukhopadhyay, Zerah, Samanta, Maria, 2016). The substantial emergence of these census towns during the decade spanning 2001 to 2011 has sparked scholarly interest regarding the nature of these settlements (Pradhan, 2013) and the underlying factors contributing to their development (Kundu, 2011; Bhagat, 2011). The classification of a CT is inherently dynamic, as it may be reclassified from urban status to rural status (Bhagat, 2011). The criteria for designation as a CT include i) a locality with a population of 5000 or more; ii) a population density of 400 individuals per square kilometer; and iii) a male workforce where 75% is engaged in non-agricultural activities. However, certain settlements with populations below 5000 have been categorized as urban (Danis & Marins-Gnanou, 2011; Kundu, 2011), leading to the exclusion of numerous settlements with populations exceeding 10000 from urban classification in the 2001 census (Sivaramakrishnan et al., 2005; Danis & Marins-Gnanou, 2011). These census towns are referred to as 'non-recognized' since they have been designated as 'urban' by the Census of India, yet have not been conferred the status of 'statutory urban' (Urban Local Bodies, abbreviated as ULBs) by state authorities (Samanta, G, 2012). Pradhan (2012) characterizes this form of urbanization and the resultant growth within the category of census towns as 'unacknowledged urbanization'. Denis, Mukhopadhyay, and Zerah (2012) assert that the retention of census towns without granting them statutory urban status by the state represents a case of 'denied urbanization'.

Table 1: Census Town between 2001 & 2011

Sl. No	State	Total CT in 2001	Total CT in 2011
	All India	1362	3894
1	Andhra Pradesh	93	228
2	Arunachal Pradesh	17	1
3	Assam	45	126
4	Bihar	5	60
5	Chhattisgarh	22	14
6	Goa	30	56
7	Gujarat	74	153
8	Haryana	22	74
9	Himachal Pradesh	1	3
10	Jammu and Kashmir	3	36
11	Jharkhand	108	188
12	Karnataka	44	127
13	Kerala	99	461
14	Madhya Pradesh	55	112
15	Maharashtra	127	279
16	Manipur	5	23
17	Meghalaya	6	12
18	Nagaland	1	7
19	Odisha	31	116
20	Punjab	18	74
21	Rajasthan	38	112
22	Sikkim	1	1
23	Tamil Nadu	111	376
24	Tripura	10	26
25	Uttarakhand	12	42
26	Uttar Pradesh	66	267
27	West Bengal	252	780
28	Andaman and Nicobar	2	4
29	Chandigarh	0	5
30	NCT of Delhi	59	110
31	Dadra and Nagar Haveli	2	5
32	Daman and Diu	0	6
33	Lakshadweep	3	6
34	Puducherry	0	4

Mizoram had no CT in either 2011 or 2001.
Source: Census of India.

In the preceding decade, the majority of census towns have emerged predominantly in West Bengal, Tamil Nadu, and Kerala, with West Bengal accounting for the largest proportion (780 CTs) (Table 1). These newly established census towns have contributed to 66% of urban growth in West Bengal (Pradhan, 2012). The low cost of land and minimal rural property taxes have rendered the census towns near major cities appealing to second-home buyers. Likewise, stakeholders in the real estate sector are inclined to invest for long-term capital appreciation. Consequently, these non-statutory towns present attractive opportunities for the general populace due to the affordability of residential land (Jenkins, Anuja, and Gadgil, 2012). Approximately 75% of the new census towns in West Bengal have arisen in districts characterized by a predominantly agricultural economy, situated at a considerable distance from established urban-industrial zones (Samanta, G). The districts of Haora, South 24 Parganas, and Bardhaman exhibit the highest rates of growth in terms of census towns (Table 2). Chakraborty and Dasgupta (2011) postulated a similar trajectory through the examination of regional data on urban conditions from 1981 to 2001 in their investigation of regional disparities in the urban growth dynamics of West Bengal. In West Bengal, census towns are administered by Gram Panchayats (the most fundamental tier of rural governance in India); however, the developed areas frequently extend across various Panchayats, thereby complicating the governance and provision of infrastructure and services (Samanta, G, 2012). This misalignment not only hampers service delivery but also exacerbates disparities in access to essential amenities such as healthcare, education, and sanitation. Furthermore, with real estate developers increasingly eyeing these regions for investment opportunities due to lenient regulatory frameworks, there is a pressing need for comprehensive policy interventions that can foster sustainable urban planning while addressing the unique challenges posed by these emergent towns (Guin & Das).

Table 2: District-wise Census Town in West Bengal, 2011

Districts	Number of CTs	Percentage
Darjeeling	24	3.08
Jalpaiguri	18	2.31
Koch Bihar	12	1.54
Uttar Dinajpur	5	0.64
Dakshin Dinajpur	5	0.64
Maldah	27	3.46
Murshidabad	65	8.33
Birbhum	14	1.79
Barddhaman	86	11.03
Nadia	55	7.05
N. 24 Parganas	78	10.00
Hugli	64	8.21
Bankura	9	1.15
Purulia	25	3.21
Haora	135	17.31
Kolkata	0	0.00
S. 24 Parganas	111	14.23
Paschim Medinipur	11	1.41
Purba Medinipur	20	2.56
Alipurduar	16	2.05
Total	780	100.00

Source: Census of India, Calculated by the author

The present research has been done to elucidate the prevailing conditions of the urban centers, specifically highlighting the lack of essential urban amenities & also to evaluate the efficacy of the local administrative entities in delivering urban services.

2. Methodology

Measuring urbanity within census towns necessitates a comprehensive methodology that incorporates demographic, infrastructural, and socio-economic dimensions. Contemporary research underscores diverse methodologies and frameworks for evaluating urbanity, particularly within the paradigm of developing nations, as exemplified by the Infrastructure Index (Halder, 2023). In this context, an Important Performance Analysis (IPA) has been done here to assess residential satisfaction concerning the services rendered by the administrative authority. The IPA methodology integrates metrics of customers' perceived performance and the significance of attributes into a bi-dimensional representation to enhance data interpretation (Martilla & James, 1977). This model posits that when perceived performance surpasses expectations, it results in positive disconfirmation (i.e., satisfaction), whereas a scenario where expectations exceed perceived performance culminates in negative disconfirmation (i.e., dissatisfaction) (Martilla and James, 1977; Oh, 2001). Initially conceived for marketing applications, its utility has broadened to encompass various domains, including tourism, food services, education, healthcare, banking, public administration, e-business, and information technologies (Sever, 2015).

In this instance, IPA has been utilized to elucidate the performance of Gram Panchayet in delivering civic amenities. Respondents were posed two inquiries regarding each attribute on a five-point rating scale: What is the significance of the service? How effectively did the panchayet perform? A total of 100 samples were randomly selected. The semi-structured questionnaire encompassed inquiries about the demographic and socio-economic profiles of the respondents, in addition to a rating scale addressing the importance and performance of the chosen variables. Ultimately, IPA has been graphically represented within a bi-dimensional grid. This grid facilitates a visual comparison, allowing stakeholders to identify areas of strength and those requiring improvement, thereby guiding future policy decisions and resource allocation.

Case Study of Panuhat Census Town

Panuhat is a census town in Katwa I CD Block of the Katwa subdivision in the Purba Bardhaman district of West Bengal, which became CT in 2001. It is situated on the right bank of the river Bhagirathi, adjacent to the Katwa municipality. The area coverage of this CT is 1.03 sq. km with a population density of 6300/ sq.km (2011). The total population is 6473 having 1589 households according to census 2011. The town is reasonably well accessible having SH-21 and Eastern railways which extend from Sealdah to Katwa and Howrah to Katwa. Being located in the vicinity of Katwa municipality, spill over population of Katwa settled here. Spatial expansion of Katwa had been obstructed on all sides except the western part due to physical barriers, leading to continuous build-up

area in the western part i.e. in Panuhat & it merges with Panuhat CT. Now the question arises Why Panuhat has not been defined as a Statutory Urban area by ULB in West Bengal? The reason behind this is the West Bengal Municipal Act,1933 (Datta 2002); three-fold criterion for becoming urban- population size of 30,000, density of 750/sq km & 50% of the population engage in non-agricultural activities. Though Panuhat fulfills the second & third criterion, far behind from the first one. Panuhat is under Khajurdihi Gram Panchayet & at present spatial development of this CT is not confined to its boundary, but rather spread to adjacent village Mandalhat. Here is the lack of census census-defined urban area which does not include the population of urban agglomeration. In this way process of 'denied urbanization' is continuing in West Bengal.

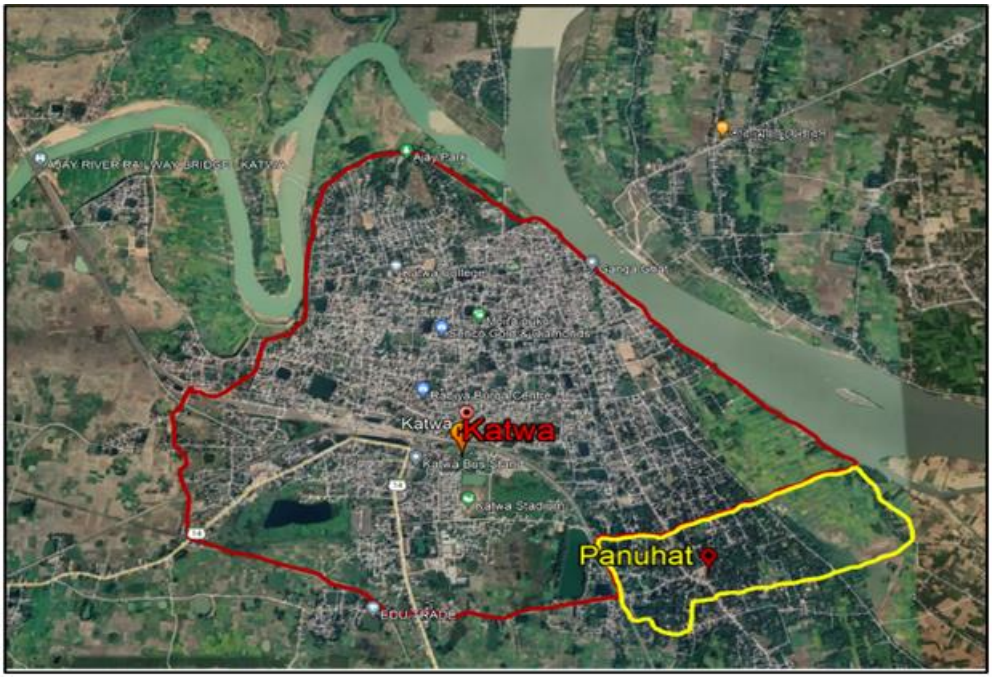

Figure 1: Panuhat CT, adjacent to Katwa municipality

Being located in the agriculture-rich hinterland, this census town experiences agricultural practices as per field survey data 14% of people have agricultural land (Table 4) that produces paddy, jute, mustard & vegetables. It fulfills the criterion of both census town & statutory urban area of having a higher percentage of non-agricultural workforce. As per the 2011 census, 92.69% (Table 3) of the main workers are in the non-agricultural sector. However, it is not possible to work out the percentage of workers engaged in non-farm activities because of data limitations at the village level.

Table 3: Occupational structure of Panuhat census town, 2011

Main Worker	Total	%	Marginal Worker	Total Worker
Cultivator	36	1.48		
Agricultural labor	142	5.83		
Household worker	251	10.32		
Others	2005	82.37		
Total	2434	100	251	2685

Source: Census of India

Table 4: Respondent's demographic and socioeconomic characteristics

Variables		Observations	Maximum	Minimum	Mean	Std. Deviation
Age		100	86	21	46.12	14.20
Religion	Hindu	95	1	2	1.05	0.219
	Muslim	5				
Caste	General	30	1	4	2.33	1.19
	OBC-A	5				
	OBC-B	29				
	SC	36				
Family Member		100	1	18	5.12	2.88
Earning Member		80	1	8	1.9	1.197
House type	Kachha	16	1	3	1.97	0.54
	Pucca	71				
	Semi-pucca	13				
Agricultural land		14				
Power loom/Handloom		22				

Source: Field survey

The once flourishing handloom industry now become unprofitable here due to the increased cost of thread & marketing. Still, 22% (Table 4) of people as per field survey data are in this activity with the change of handloom to power

loom, make cotton *than* for Panjabi, *gamcha*, *lungi*, napkin, etc. Besides this, People of this town mainly engage in carpentry, pottery, wholesale & retail business& transportation work.

The socio-economic status of individuals, as well as their access to fundamental facilities and civic amenities, is contingent upon the degree of urbanization. The availability of potable water, sanitation, and healthcare services, along with housing quality, can be regarded as indicators of the collective progress and welfare of the populace. In the conducted field survey, respondents were queried in a binary format (Yes/No) regarding their access to these essential facilities, the outcomes of which are illustrated in Fig. 2, revealing a distressing scenario for the individuals who are unable to utilize services such as street lighting, public drainage, waste collection, and recreational parks. Although there is access to drinking water, it is not provided by the Gram Panchayat; instead, the community relies on its tubewell for potable water.

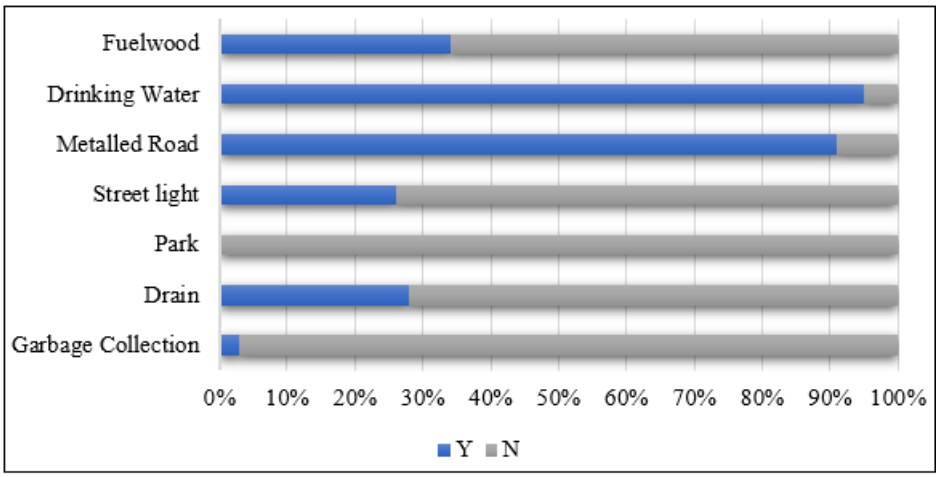

Figure 2: Satisfaction level of the respondents

Source: Field survey

To evaluate the level of urbanity, an importance-performance analysis was conducted based on eight variables: water supply, sewage management, transportation, healthcare services, education, recreational opportunities, waste collection, street lighting, and safety. These variables were quantified using a five-point Likert scale, where a score of 1 indicated extreme dissatisfaction and a score of 5 signified extreme satisfaction. A reliability test among the variables was performed, yielding a Cronbach's alpha value of 0.74, which indicates a satisfactory level of internal consistency among the variables; that is, the response values from each participant across a series of questions exhibit reliability, thereby validating the measurement scale of the survey instrument. While analysts often accept a threshold of 0.7 for Cronbach's alpha as indicative of reliability, Schmitt (1996) has posited that no universal threshold (such as 0.70) exists for determining acceptability; rather, instruments with relatively low alpha values can still be beneficial under certain conditions, as alpha is influenced by the length of the assessment. If the instrument is overly concise, the alpha value is diminished. Therefore, to enhance the alpha coefficient, additional relevant items that assess the same construct should be incorporated into the instrument (Streiner D, 2010).

Table 5: Reliability statistics & item statistics of parameter Importance & Performance

Cronbach's Alpha	0.744			
Cronbach's Alpha Based on Standardized Items	0.749			
No. of Items	9			
	Importance		**Performance**	
Variables	**Mean**	**Std. Deviation**	**Mean**	**Std. Deviation**
Water Supply	2.56	1.35	2.56	1.14
Sewerage	3.7	1.16	1.57	0.86
Transportation	3.15	1.17	2.16	0.86
Health	3.59	1.04	1.89	0.75
Education	2.83	1.17	2.89	1.02
Recreation	3.13	1.35	1.52	0.76
Garbage Collection	4.06	1.11	1.11	0.45
Street Light	4.06	1.11	2.11	1.46
Safety	3.15	1.17	3.09	0.67

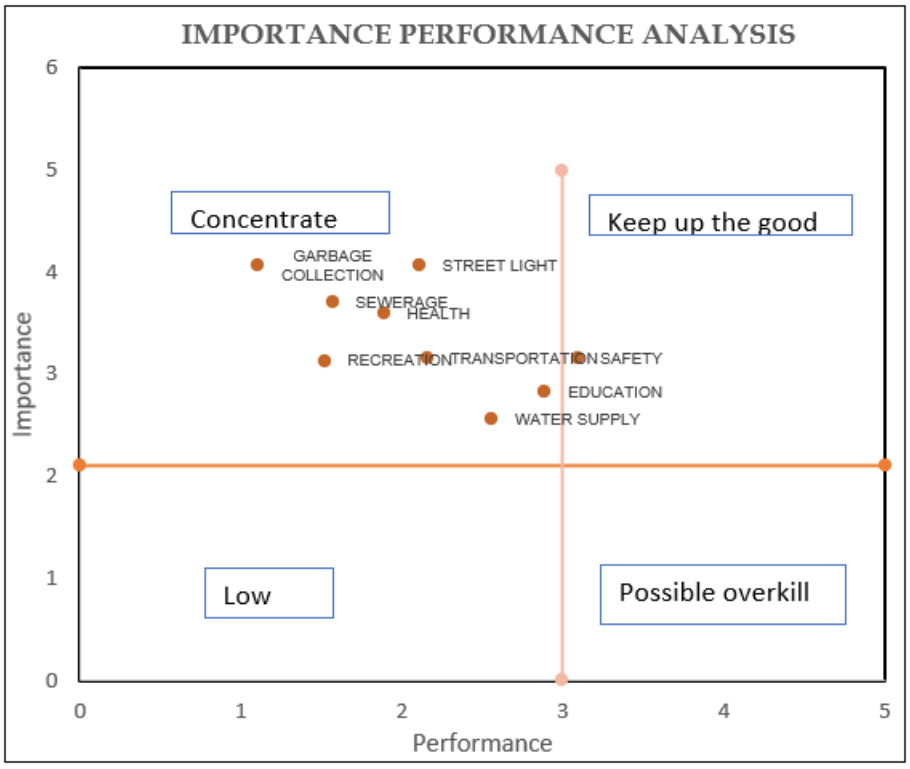

Figure 3

To ascertain the significance that respondents attribute to various service characteristics, as well as to evaluate the performance of the Panchayat, mean values and standard deviations for the aggregated data have been computed. The findings are delineated in Table 5, which indicates that a majority of the attributes are deemed important, particularly waste collection and street lighting. Conversely, the performance levels of these attributes are markedly low, except for safety and security measures. Respondents express considerable dissatisfaction with the services of waste collection (1.11), sewage infrastructure (1.57), healthcare provisions (1.89), and recreational facilities (1.52). The Importance-Performance matrix is depicted in Fig. 3. In this graphical representation, quadrant A signifies "concentrate," wherein attributes are regarded as important and their performance can be enhanced. Quadrant B, labeled "Keep up the good work," denotes areas where residents are satisfied with the existing performance. Quadrant C indicates "low priority," characterized by both low importance and performance. Finally, quadrant D represents "possible overkill," where performance exceeds expectations. The result is spread over two quadrants (Fig.2), mainly in quadrant A except safety security in quadrant B. Here panchayet cannot provide water to every household like ULBs. Tubewells are found almost in every household, as per the field survey it is 95% (Fig.2) households. Sewerage conditions are also not satisfactory and become worse in the rainy season when draining water overflows onto the roads. The absence of street lights & garbage collection system is also a matter of concern for the people of this town. So, in aspects of the availability of basic needs & civic amenities, this census town is far behind in fulfilling the criterion of statutory urban area.

3. Conclusion

In conclusion, the rapid urbanization of India, particularly through the emergence of Census Towns (CTs), highlights a significant shift in the demographic landscape, accounting for nearly 30% of urban growth over the past decade. However, this phenomenon raises critical concerns regarding the socio-economic implications for these reclassified areas, which often remain administratively tied to their rural roots under the Gram Panchayet system. As such, the well-being of residents in CTs may not align with that of statutory towns, revealing the incomplete and contingent nature of this urbanization process. The precarious status of CTs, contingent on meeting specific population and workforce criteria, further complicates their sustainability and raises questions about the validity of the long-standing definitions used to classify urban areas since 1961. This analysis ultimately prompts a necessary discourse on the adequacy of existing urban classification metrics in light of evolving urban dynamics, advocating for a reassessment that reflects the complexities of contemporary urban life and ensures that the criteria for urban designation are relevant and effective in capturing the realities of today's urban environments. Moreover, the implications of this urban classification extend beyond administrative concerns to encompass significant socio-political dimensions. The governance structures in place for Census Towns often lack the resources and authority needed to address the unique challenges these areas face, such as infrastructure development and service delivery, which are typically more robust in formally recognized urban centers. This discrepancy is compounded by a dispersed pattern of in situ urbanization that has emerged from state policies reluctant to acknowledge new statutory towns, leading to a growing population living under rural frameworks despite their urban characteristics. Furthermore, as these CTs continue to evolve, understanding the historical context and

local narratives becomes imperative, suggesting that merely relying on census data may overlook critical facets of urban life that inform policy decisions and community needs. Thus, a comprehensive re-evaluation of urban classification not only necessitates updated metrics but also calls for an inclusive approach that considers the lived experiences of residents within these rapidly changing environments.

Ethical Statement

Author hereby declare that this manuscript is original work, and has not been previously published elsewhere. Permission to conduct field survey for this research was obtained by all respondents, who were informed about the purpose of this research & how their responses would be used.

Conflict of Interest

There are no conflicts of interest to be declared. Author has no affiliation with any organization with a direct or indirect financial interest in the subject matter discussed in the manuscript.

References

[1] Bhagat, R B (2011). "Emerging Pattern of Urbanisation in India", *Economic & Political Weekly*, 46(34): 10-12.
[2] Chakravorty, S. and M. Dasgupta (2011). 'Some aspects of urbanization in Eastern India' Discussion Paper, 35(2), Centre for Urban Economic Studies, University of Calcutta.
[3] Denis, E. and K. Marius-Gnanou (2011). 'Towards a Beter appraisal of urbanization in India' *Cybergeo: European Journal of Geography* 569.
[4] Denis, E, P Mukhopadhyay and M H Zérah (2012). Subaltern Urbanisation in India, Review of Urban Affairs, *Economic & Political Weekly*, 47 (30): 52-62.
[5] Guin, D., & Das, D. N. Spatial Perspectives of the New Census Towns, 2011 A Case Study of West Bengal. *Environment and Urbanization Asia*. https://doi.org/10.1177/0975425315589155
[6] Jenkins, C., Anuja & Gadgil, M. (2012). Zero amenities, yet census town hit the property jackpot. Live Mint.https://www.livemint.com/Politics/364m2CaVtj2HoR88spSpNM/Zero-amenities-yet-census-towns-hit-the-property-jackpot.ht
[7] Kundu, A. (2011). Method in Madness: Urban Data from 2011 Census, *Economic & Political Weekly*, Vol 46, No 40, pp 13–16.
[8] Martilla, J.A. and James, J.C. (1977) Importance-Performance Analysis. *Journal of Marketing*, 41, 77-79.
[9] Myers, J, and Alpers. M (1968). Determining Attributes: Meaning and Measurement, *Journal of Marketing*, Vol. 32, No. 4, pp. 1-4.
[10] Mitra, S. and K. Mukherjee (2008). 'Integrated and inclusive development of urban West Bengal: The KUSP perspective', *Urban Management*, 13: 31-54.
[11] Mukhopadhyay, P. (2017) Does administrative status matter for small towns in India? in Denis E. and Zérah M-H. (eds.), *Subaltern Urbanization in India: An Introduction to the Dynamics of Ordinary Towns*, Springer
[12] Mukhopadhyay, Partha & Zerah, Marie - Hélène & Samanta, Gopa & Maria, Augustin. (2016). Understanding India's Urban Frontier: What Is Behind the Emergence of Census Towns in India? 10.1596/1813-9450-7923.
[13] Pradhan, K.C. (2013). "Unacknowledged Urbanisation: New Census Towns of India," *Economic & Political Weekly*, Vol 48, No 36, pp 43–51.
[14] Pradhan, K. C. (2012). 'Unacknowledged urbanization: The census towns of India' CPR Urban Working Paper 2, Centre for Policy Research, New Delhi.
[15] Roy, A. (2015). 'What is Urban About Critical Urban Theory?' *Urban Geography*, 1–14. doi: 10.1080/02723638.2015.1105485
[16] Samanta, Gopa (2012): "In Between Rural and Urban: Challenges for Governance of Non- Non-recognized
[17] Urban Territories" in N Jana et al (ed.), *West Bengal: Geo-Spatial Issues* (Burdwan: University of Burdwan), 44-57.
[18] Schmitt, N. (1996). Uses and Abuses of Coefficient Alpha. Psychological Assessment, 8, 350-353.
[19] https://doi.org/10.1037/1040-3590.8.4.350
[20] Sever, I (2015). Importance-performance analysis: A valid management tool? *Tourism Management*, Vol 48, pp 43-53. https://doi.org/10.1016/j.tourman.2014.10.022
[21] Sivaramakrishnan, K C, Amitabh Kundu and B N Singh (2005): Handbook of Urbanisation in India: An Analysis of Trends and Processes (New Delhi: Oxford University Press).
[22] Streiner, D. L. (2003). Starting at the Beginning: An Introduction to Coefficient Alpha and Internal Consistency. *Journal of Personality Assessment*, *80*(1), 99–103. https://doi.org/10.1207/S15327752JPA8001_18