Assessment of Basic Services in Midnapore Town

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ABSTRACT: It is prominently observed that the rate of urbanization and population has gradually increased with the changing of time and space. The town and municipality areas are no exception in this regards because human beings always wants to get better opportunity and services for living viz. foods, cloths, shelter and different socio-cultural amenities and assets. It is clearly understood that urbanization has significant impact on urban centres, whether the area is core or peripheral. The urbanization process effects the availability and accessibility of various urban services and facilities of the urban centres. In this context the present paper is an attempt to assess of basic services in Midnapore Town in terms of availability of basic amenities. The study is mainly based on secondary sources of data collected from various publications of Census of India for the latest Census year. The impact of urbanization has been measured through various indices for the study area. The accessibility of basic civic amenities in the study area is measured with the help of Deprivation Index. From the regional inequality it is evident that the accessibility of basic civic amenities is found to be more deprived in peripheral wards than core area of the town.

KEY WARDS: Urbanization, Deprivation Index, Amenity.

I. INTRODUCTION

Rapid growth in population unaccompanied by adequate investment in urban development during the post independence period has led to a serious deficiency in the availability of infrastructure, basic amenities and assets in towns and cities in the country (Hassan and Daspattanayak, 2008; Bhunia and Chakraborty, 2018). In their study Kundu et al. (1999) opined that disparity is extremely high in the provision of basic services and facilities across different states and various size-class categories of urban centres. Pal et al. (2015) in their work on India examined the distribution pattern of housing and basic civic amenities, mainly, drinking water, toilets and electricity across spatio-temporal dimension. In this context the present paper is an attempt to assess of basic services in Midnapore Town in terms of availability of basic amenities.

II. STUDY AREA

Midnapore Town is situated on the northern bank of Kasai River. The location coordinates of this town is the intersection of 22°2´ N parallel of latitude and 87°19´ E meridian of longitude. It is the district head quarter of Paschim Medinipur district. For administrative purpose the Town is divided into 24 wards. It is also agricultural based commercial as well as administrative town. Midnapore Town occupies 2nd position in terms of urban population in the Paschim Medinipur District in 2011 census. The total population of the town is about of 1,69,264, out of which 84,977 are males and 84,287 are females, population density is 9331 persons/ sq. km, sex ratio is 992/ 1000 Male, SC population 7.63%, ST population 2.72 %, work participation rate 35.45%, Literacy rate is 88.99 % in 2011 census in the town and decadal growth rate of population 13.025 (2001-2011).
III. OBJECTIVES

The main objectives of the study are
1. To assess the civic services in Midnapore Town as well as its inequality across the wards of the study area.
2. To propose a balanced planning to provide adequate infra-structure facilities in the deprived wards.

IV. DATABASE AND METHODOLOGY

The study is mainly based on secondary sources of data collected from various publications of Census of India for the latest Census year viz. Primary Census Abstract, Census of West Bengal, 2011 (Electronic format), House listing & Housing Census, Census of West Bengal, 2011 (Electronic format) and Statistical Abstract, Paschim Medinipur District, West Bengal, 2011 (Electronic format).

There are seven indicators of household amenities are used to assess the basic amenities of Midnapore Town across different wards viz. ward-wise percentage of households having main source of drinking water, ward-wise percentage of households with location of drinking water sources, ward-wise percentage of households having latrine facility, ward-wise percentage of households having waste water outlet connection, ward-wise percentage of households having bathing facility, ward-wise percentage of households having main source of lighting, ward-wise percentage of households having kitchen facility and ward-wise percentage of households used type of fuel used for cooking. For the analysis, a simple cartographic and statistical technique has been applied. The accessibility of basic civic amenities in the study area is measured with the help of Deprivation Index.

\[
\text{Deprivation Index, } DI = \frac{M_{x_i} - O}{M_{x_i} - M_{n_i}}
\]

Where, \(M_{x_i}\) and \(M_{n_i}\) are the largest and smallest values among all the urban centres on the indicator, and \(O\) is the value of \(i^{th}\) indicator in \(j^{th}\) urban unit (i.e. the urban unit for which the index is intended to be worked out).

V. ASSESSMENT OF BASIC AMENITIES IN MIDNAPORE TOWN

It is evident from the above table that share of basic amenities are quite variable across the wards of Midnapore Municipality. The study incorporate select amenities, except it’s all categories, in addition to few amenities with its location viz. household having tap water, sources of drinking water within premises, drainage connectivity for waste water outlet, latrines within the premises, bathing facility within the premises, electricity, separate kitchen inside the house and LPG/ PNG connections as cleaner fuel to examine ward-wise disparity based on Deprivation Index.
Table 1 - Deprivation Index of Basic Amenities, Ward-wise, Midnapore Town, 2011

<table>
<thead>
<tr>
<th>Ward No.</th>
<th>Area Name</th>
<th>Top Water</th>
<th>Sources of Drinking Water within Premises</th>
<th>Draining Outlets within Premises</th>
<th>Latrines within Premises</th>
<th>Bathing Facility within Premises</th>
<th>Electricity</th>
<th>Separate Kitchens inside the House</th>
<th>Toilets with GPF/PNG</th>
<th>Aggregate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ward No. 1</td>
<td>98.88</td>
<td>19.80</td>
<td>77.08, 87.38</td>
<td>77.29</td>
<td>75.30</td>
<td>56.00, 86.00</td>
<td>0.05</td>
<td>0.05</td>
<td>0.27</td>
<td>0.41</td>
</tr>
<tr>
<td>Ward No. 2</td>
<td>94.00</td>
<td>17.40</td>
<td>77.08, 86.00</td>
<td>77.38</td>
<td>87.10</td>
<td>68.78, 54.00</td>
<td>0.12</td>
<td>0.07</td>
<td>0.20</td>
<td>0.43</td>
</tr>
<tr>
<td>Ward No. 3</td>
<td>94.00</td>
<td>20.00</td>
<td>65.78, 93.03</td>
<td>70.79</td>
<td>89.89</td>
<td>63.75, 70.31</td>
<td>0.08</td>
<td>0.05</td>
<td>0.37</td>
<td>0.41</td>
</tr>
<tr>
<td>Ward No. 4</td>
<td>94.80</td>
<td>15.70</td>
<td>94.00, 95.31</td>
<td>83.90</td>
<td>90.90</td>
<td>73.75, 70.75</td>
<td>0.05</td>
<td>0.05</td>
<td>0.20</td>
<td>0.43</td>
</tr>
<tr>
<td>Ward No. 5</td>
<td>95.00</td>
<td>35.70</td>
<td>97.00, 90.30</td>
<td>95.20</td>
<td>98.10</td>
<td>86.30, 81.40</td>
<td>0.08</td>
<td>0.26</td>
<td>0.34</td>
<td>0.44</td>
</tr>
<tr>
<td>Ward No. 6</td>
<td>92.30</td>
<td>24.00</td>
<td>78.20, 88.28</td>
<td>77.50</td>
<td>90.70</td>
<td>68.78, 64.00</td>
<td>0.16</td>
<td>0.74</td>
<td>0.23</td>
<td>0.41</td>
</tr>
<tr>
<td>Ward No. 7</td>
<td>94.00</td>
<td>26.00</td>
<td>73.00, 76.38</td>
<td>80.40</td>
<td>93.00</td>
<td>54.00, 85.00</td>
<td>0.03</td>
<td>0.05</td>
<td>0.37</td>
<td>0.41</td>
</tr>
<tr>
<td>Ward No. 8</td>
<td>98.70</td>
<td>37.70</td>
<td>73.10, 70.44</td>
<td>72.70</td>
<td>85.50</td>
<td>61.00, 56.00</td>
<td>0.03</td>
<td>0.59</td>
<td>0.37</td>
<td>0.41</td>
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<tr>
<td>Ward No. 9</td>
<td>96.70</td>
<td>26.00</td>
<td>88.30, 94.80</td>
<td>92.00</td>
<td>93.30</td>
<td>78.20, 67.70</td>
<td>0.07</td>
<td>0.87</td>
<td>0.24</td>
<td>0.41</td>
</tr>
<tr>
<td>Ward No. 10</td>
<td>93.60</td>
<td>22.00</td>
<td>82.00, 96.00</td>
<td>85.00</td>
<td>83.60</td>
<td>73.00, 70.30</td>
<td>0.04</td>
<td>0.00</td>
<td>0.32</td>
<td>0.46</td>
</tr>
<tr>
<td>Ward No. 11</td>
<td>97.00</td>
<td>22.00</td>
<td>86.00, 85.00</td>
<td>78.70</td>
<td>59.50</td>
<td>63.00</td>
<td>0.03</td>
<td>0.75</td>
<td>0.23</td>
<td>0.41</td>
</tr>
<tr>
<td>Ward No. 12</td>
<td>94.00</td>
<td>26.00</td>
<td>85.00, 82.30</td>
<td>68.90</td>
<td>97.10</td>
<td>47.70</td>
<td>0.12</td>
<td>0.75</td>
<td>0.37</td>
<td>0.41</td>
</tr>
<tr>
<td>Ward No. 13</td>
<td>95.00</td>
<td>22.00</td>
<td>78.08, 85.30</td>
<td>86.00</td>
<td>95.00</td>
<td>50.00, 42.00</td>
<td>0.08</td>
<td>0.79</td>
<td>0.20</td>
<td>0.43</td>
</tr>
<tr>
<td>Ward No. 14</td>
<td>97.00</td>
<td>28.20</td>
<td>87.50, 93.10</td>
<td>86.10</td>
<td>93.10</td>
<td>77.70, 63.00</td>
<td>0.05</td>
<td>0.71</td>
<td>0.21</td>
<td>0.44</td>
</tr>
<tr>
<td>Ward No. 15</td>
<td>95.00</td>
<td>35.70</td>
<td>92.00, 86.00</td>
<td>77.70</td>
<td>72.00</td>
<td>50.70, 56.00</td>
<td>0.08</td>
<td>0.47</td>
<td>0.37</td>
<td>0.44</td>
</tr>
<tr>
<td>Ward No. 16</td>
<td>95.00</td>
<td>44.00</td>
<td>92.00, 95.00</td>
<td>93.00</td>
<td>97.00</td>
<td>86.70, 86.00</td>
<td>0.10</td>
<td>0.47</td>
<td>0.37</td>
<td>0.44</td>
</tr>
<tr>
<td>Ward No. 17</td>
<td>95.00</td>
<td>27.40</td>
<td>83.00, 90.70</td>
<td>82.70</td>
<td>67.70</td>
<td>62.70, 48.00</td>
<td>0.14</td>
<td>0.73</td>
<td>0.32</td>
<td>0.47</td>
</tr>
<tr>
<td>Ward No. 18</td>
<td>99.80</td>
<td>25.00</td>
<td>91.00, 92.30</td>
<td>91.00</td>
<td>92.00</td>
<td>73.00, 99.80</td>
<td>0.08</td>
<td>0.49</td>
<td>0.55</td>
<td>0.45</td>
</tr>
<tr>
<td>Ward No. 19</td>
<td>97.00</td>
<td>22.00</td>
<td>78.00, 84.30</td>
<td>86.00</td>
<td>95.00</td>
<td>77.00, 56.00</td>
<td>0.08</td>
<td>0.78</td>
<td>0.24</td>
<td>0.42</td>
</tr>
<tr>
<td>Ward No. 20</td>
<td>95.00</td>
<td>20.00</td>
<td>60.30, 70.50</td>
<td>64.60</td>
<td>55.20</td>
<td>65.10, 36.00</td>
<td>0.05</td>
<td>0.81</td>
<td>0.32</td>
<td>0.47</td>
</tr>
<tr>
<td>Ward No. 21</td>
<td>95.00</td>
<td>24.00</td>
<td>62.30, 70.00</td>
<td>70.60</td>
<td>59.30</td>
<td>74.00, 49.00</td>
<td>0.21</td>
<td>0.76</td>
<td>0.44</td>
<td>0.47</td>
</tr>
<tr>
<td>Ward No. 22</td>
<td>96.00</td>
<td>22.00</td>
<td>78.00, 74.00</td>
<td>78.00</td>
<td>90.00</td>
<td>70.00, 92.10</td>
<td>0.14</td>
<td>0.80</td>
<td>0.05</td>
<td>0.43</td>
</tr>
<tr>
<td>Ward No. 23</td>
<td>95.00</td>
<td>24.00</td>
<td>86.70, 84.10</td>
<td>86.20</td>
<td>99.70</td>
<td>77.40, 99.30</td>
<td>0.09</td>
<td>0.86</td>
<td>0.29</td>
<td>0.58</td>
</tr>
</tbody>
</table>

Source: Computed by the author from Housinglisting & Housing Census, West Bengal, 2011.

Figure 2 - WARD-WISE INEQUALITY (BASIC AMENITIES) MIDNAPORE TOWN, 2011

<table>
<thead>
<tr>
<th>Average Deprivation Index</th>
<th>3D意愿 Map</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 0.25</td>
<td>0.25 - 0.50</td>
</tr>
<tr>
<td>0.50 - 0.75</td>
<td>0.75 - 1.00</td>
</tr>
</tbody>
</table>

www.ijhssi.org 26 | Page
It is noted that out of all wards, the average deprivation index is found maximum in Ward No. 19 (0.89), Ward No. 7 (0.67), Ward No. 21 (0.66) and same at Ward No. 15 (0.66). But the average deprivation index is much lesser in Ward No. 23 (0.03) in contrast to the previous mentioned wards followed by Ward No. 5 (0.14) and Ward No. 22 (0.17). It is observed that the wards in the western part report a very low level of amenities available in the houses along with the central part. Simultaneously, deprivation indices are also not so better over few wards of southern part. The availability of basic amenities is not too better in the eastern part also. It is noted that peripheral wards are more derived than the core area regarding various facilities due to concentration of slum population, domination by the scheduled population and minorities, concentration of the immigrant dwellers those who are mainly associated with informal sectors or agriculture and allied sectors etc. It can be argued that the residents of the peripheral areas are not economically too sound because they are mainly daily wages labours.

VI. MAJOR FINDINGS AND SUGGESTIONS

1. From analysis to deprivation index, the availability of basic amenities and services are better in the central part of the town than the peripheral wards with few exceptions.
2. The municipality should extend varies urban facilities and services to the downtrodden wards. Such extension of urban services and facilities will not only solve the inadequacy problems but also will reduce the disparity.
3. Household income is closely related to the housing condition and availability of these services and assets. Wealthy households have better access to good condition of houses with more dwelling rooms, quality fuels, reliable electricity, sanitary latrines and tap water etc. Thus economic policy needs to accelerate urban employment growth and income opportunity.
4. On the other hand, local governing bodies must be regularly examined the problems of the residence and should revised the plans and policies for the betterment of the urban centre.

REFERENCES

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