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Urbanscape: Access to Basic Amenities Across Towns In North-Eastern India

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The paper analysed data on basic amenities in the North-eastern states of India from the latest available Census of India at urban level. The complex physiographic conditions, annual flooding, problems of social and political unrest, long international borders are areas of concern in the region. It remained in shadow for a long period of time and started rapidly urbanizing only recently. The paper analysed the availability of urban basic services (UBS), namely water, sanitation and electricity, across different size class of towns. It also tried to understand the relationship of availability with socio-economic and demographic parameters. The study infers that geographical uniqueness determines to certain extent, the availability of UBS. The relationship of UBS with socio-economic and demographic parameters is not as evident as suggested by other scholars.

Keywords: Basic Amenities, Urbanization, North- Eastern Region (NER), Socio-economic and Demographic Characteristics

Introduction

Urbanization is an important aspect of population growth in India that has been constantly shaping the general living conditions. The proliferation of towns and cities impact the socio – economic life of its people. Today India has a large proportion of people residing in the urban areas. It is one of the most rapidly urbanizing countries in the world. . It is experiencing an increase in the share of urban population as most urban areas have developed as administrative or service towns. The urbanization in north east as distinct to the national urbanization shows that there is a large proportion of the population residing in urban centres. Medium and small towns are large in number but they constitute the lowest share of the urban population. This reflects the uneven distribution of towns.

It has been observed that majority of the cities in the region are unplanned as the level of urbanization

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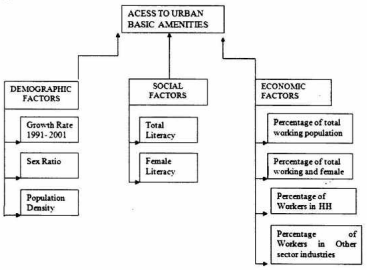
had accelerated only in the post independence era. They grew as trade or administrative centres. The towns are usually very small and have acquired urban status through the municipal status given to them. Physical condition plays a very important role in the development of the North–Eastern Region (NER) and hence, its implication is seen in the distribution of the towns as well. The undulating hilly terrain limits urban city growth and various urban services associated with it. Thus, keeping in mind these unique characteristics of the region, it is found necessary to study the availability of basic amenities across various size class towns of NER.

The term basic amenities refer to the civic amenities required for a healthy living environment. Availability of these civic services like safe drinking water, sanitation and sewerage facilities and electricity reflect the quality of life in a given area. Therefore provision of these services is very essential in today's rapidly urbanizing world.

Conceptual Framework



The urbanization process in most of the developing countries, including India shows economic dynamism where cities grow initially, benefitting from the increasing agglomeration economy, but after a certain stage due to congestion and crowding diseconomies sets in resulting the urban sprawl into the adjoining area representing social and environmental decay (Mishra, 1998; Bhagat 2004). This poses an unprecedented challenge of coping with enormous demand for housing, infrastructure services and facilities and controlling unregulated urbanization. Several studies have pointed out that

the mismatch between growth of population and growth of urban amenities causes decline in standard of living (Arunachalam 1993; Mohanty 1993; Jain 1999; Fernandes, 1999). It is found that even though the figures for 2001 are an improvement over those of 1991, the rate of progress varies across different parts of the country. The reasons for the lack of coverage put forward is the gap in demand and supply due to rapid population growth coupled with low investment in urban development (Shaw2007; Gupta 2001; Kundu 2002).

The studies reveal that the availability varies across the size class of towns also. Specifically, apart from safe drinking water, there is significant and negative relationship between size class and other amenities. Safe drinking water is relatively widely available; availability of modern toilet facility is, however, restricted to only higher order towns (Ghosh, 1993; Shaw, 2007). Though higher order cities are better served the deficiency at the service level is pronounced. There are large scale disparities in the availability of services at inter-city and intra-city levels (Ghosh, 1993; Kundu, 1993).

Several studies have indicated that availability of basic amenities could sometimes be related to the socio-economic and demographic composition of the population. The overall densities in the country have been rising due to the increasing population concentration in few urban areas. This increasing population density in urban areas place greater demands on the infrastructure, particularly the provision of water and sanitation (Shaw, 2003). Thus there could be a mismatch between demand and supply. But a study on Ahmedabad city shows that there is positive correlation with population size, urban density, availability of electricity and water, indicating that large towns or big cities with higher densities are better served through amenities (Kundu, 2002).

Shaw (2007) looks into the relationship between health and education and the prevalence of basic amenities. The author reasons that the prevalence of high literacy has a correlation between in-house toilet facility as literacy helps in the dissemination of ideas of hygiene, health and sanitation. Achievements in education and health can also be affected by the presence or absence of basic facilities such as sanitation and water supply. Study on Ahmedabad Municipal Corporation also corroborates same by mentioning that localities with high levels of literacy, high sex ratio and high percentage of workers in trade and commerce are associated with the residential colonies of the high and middle income groups having a high level of amenities. Same study also finds out localities with large number of poor migrants, resulting in high incidence of slum population and where there is high percentage of SC/ST population, low levels of literacy, low sex ratio and low percentage of workers in trade and commerce. These constitute the poorest region in the city having deficiency in basic services (Kundu, 2002)

Need for the Study

The North East India as a region comprises the states of Assam, Arunachal Pradesh, Meghalaya, Mizoram, Manipur, Tripura, and Nagaland. The region is one of the most ethinically and linguistically

diverse region of the country. Each state has its own culture and traditions. There is a very high concentration of tribal population in the region, especially in the hilly states. In the states of Arunachal Pradesh, Meghalaya, Mizoram and Nagaland majority of the population is tribal. The region hosts a great number of tribes such as the Adis, Apatanis, Angami, Ao, Garo, Khasi, Jaintias, Lushais, Bodo, Mishing, Kuki, etc.

The complex physiographic conditions proved restrictive to large scale urban development in the region in the past. Often described as a microcosm of the Indian Subcontinent, the North East is represented by all the three physiographic divisions of the country though on a much smaller scale – the northern mountains, the central plain and the southern plateau. These difficult and inhospitable terrain conditions in the hilly and plateau areas and the dangers of annual flooding in the entire stretch of the Brahmaputra valley renders the whole of north east economically backward (Nayak Debendra K, et.al, 1995). Thus, the annual flooding of the Brahmaputra valley and the difficult and inhospitable terrain conditions of hilly and plateau areas bring problems leading to economic backwardness of the region.

Apart from the physical constraints, the region also faces the problems of social and political unrest. There are various ethnic groups in almost all the states that demand for independent statehood, as a response for more development. Also the widespread ethnic conflicts have kept the entire north east disturbed for decades (Upadhyay, 2006). It has caused a lot of turmoil in the region and disrupted the proper functioning of the states. The North East also shares long international borders which are areas of concern from the security point of view. The forced migration after partition of India and the huge infiltration of migrants from neighbouring countries have caused unrest in the region. The influx of Muslim population is seen as threat by the local residents.

Physical and socio- political constraints cannot be put as a reason for long. Thus, the North-East Region has been receiving great attention from the centre in the recent decades. According to a study (Ahmad and Narain, 2009), "the states of India have been classified into 'high', 'medium' and 'low' income categories. It is noted that within the low income states, as subcategory has been formed and all the north eastern states belong to this 'special category'. Himachal Pradesh and Uttarakhnad are the only other states from outside the region that belong to the category with a slightly higher per capita income. All these states are entitled to special grant under Finance Commission as also other preferential treatment. The study brings out that the states identified as lagging based on their per capita income in 2000 – 2001 have recorded low growth not only in the eighties but also in the nineties. The low income states and north eastern states were noted to have registered 2.5 per cent and 2.8 per cent growth rates respectively for the eighties that have gone down further to 2.3 and 2.5 during nineties".

The North Eastern Region is considered to be economically and industrially backward. As per Census 2001, the region is one of the least urbanized zones in India. There is also great diversity among the individual states. Assam, the most populous state in the region, is the least urbanized with urban population comprising only 12.7 per cent of the total. On the other hand Mizoram, which has the smallest population among the states of the region, is the most urbanized state in the region and also one the most urbanized states in the country. The explanation lies with the habitation type. In Mizoram, majority of its population stay in and around Aizwal and rest of the areas are hilly and very thinly populated. But in case of Assam, population distribution is largely uniform causing low level of urbanization. The percentage share of urban population in the region as a whole is also low with 15.5 per cent, as against the all India figure of 27.8 per cent. The decadal urban growth rate shows a declining trend for the region. The urban growth rate for 1981 - 1991 stands at 50.77 per cent while it is 36.35 per cent for the decade 1991- 2001 (Premi, 2006). Urban centres of the region often act as growth engine for the region and availability of urban amenities could be called as lubricant for the engine (Bhusan, 2010). Thus the study of amenities is essential to understand the urban functions in this region.

Objectives

With the above backdrop, this paper is an attempt to analyse the overall distribution of the towns in different states and size class. Further comparative analysis of urban amenities across size class towns in north east is carried out. Finally, an attempt has been made to establish the association between level of amenities available and socio – economic characteristics of the population of the town.

Data and Methods

The study is entirely based on secondary data source. Census of India provides data on several basic amenities at the city and town level. It also provides population characteristics by incorporating socio-economic and demographic variables. The data for the study has been collected from H-Series Tables, Town Directory, and Primary Census Abstract of Census of India, 2001.

In the paper data has been analysed through different quantitative techniques. Firstly, the availability of different amenities has been expressed in a standardized format in the following manner.

1) Households having access to different facilities:

   i. Percentage of HH having access to drinking water facilities from various sources like tap water, hand pump, tube well, well and others.

   ii. In the similar way, percentage households having bathroom facilities within the house; various toilet facilities; and percentage households with different sources of lighting is also assessed.

All these variables are cross tabulated by the size class of the towns and analysed at the state level. Thus the analysis is expected to provide a regional as well as size class wise variation in theavailability of the amenities.

2) An Index of amenities has been developed using the method of Composite Indexing and it is correlated with socio- economic variables to analyse their relationship with the level of amenities in the urban areas of north east. The socio-economic variables studied are–sex ratio, literacy rate (total/female), work participation (total/female), urban population density, urban population growth rate, workforce composition (female workers/workers in different industrial categories). For the purpose of computing an index, Z- score has been calculated for amenities for all the towns. This analysis indicates the impact of socio – economic factors on the availability of urban basic amenities.

The second section deals with overall urbanization scenario in North- East including distribution of towns across the size classes, distribution of urban population across different size class in north east in comparison to country as a whole. The third section deals with distribution of selected urban amenities across the size class of the cities. A composite score is developed to identify the overall status of the amenities. Lastly the relationship between socio-economic characteristics of the population and with the composite score is tried to be established.

Urbanisation in North East Region

It is a region with hard to reach physiography as well as complex cultural features which has been a hindrance to a large scale urban development in the region in the past. As per 2001 Census, the region has 250 urban centres out of which exactly 50 percent is in the state of Assam. The state also has 6 Class I cities out of the regional total of 10. Arunachal Pradesh and Nagaland are devoid of any Class I city. Arunachal Pradesh does not even have a class II town and major concentration of the urban centres is in Class IV and V category (Table 1).

Despite the constraints imposed by the physical environment and the socio-economic structures, the region, of late, is experiencing great proliferation in the number of towns and increase in the proportion of people living in urban areas (Debendra K Nayak, et.al, 1995). Urbanisation and urban growth phenomenon of the North East have their impact reflected in the demographic profile of the region. North East India as a region shows similar trend of urbanization, as experienced by the country as a whole. One of the urban characteristics of the region is that the class wise trend of towns shows a top heavy structure of urbanization. The Class I cities which are only 10 in 2001 census, accommodates less than one- half of the urban population in the region (42.59%).

Table 1 : Distribution of towns by size class in North East India, 2001

State	I	II	III	IV	V	VI	No. of towns
Arunachal Pradesh	0	0	3	7	6	1	17
Assam	6	7	24	34	43	11	125
Meghalaya	1	2	5	8	1	0	17
Nagaland	0	2	4	3	0	0	9
Manipur	1	1	3	8	17	7	37
Mizoram	1	0	2	5	6	8	22
Tripura	1	0	6	9	7	0	23
Total	**10**	**12**	**47**	**74**	**80**	**27**	**250**

Source: Census of India, 2001

This trend is similar to India's urbanization as well, where out of the 1028 million population of the country, 107.9 million live in 35 metropolitan cities and account for 10.5 per cent of the country's population and 37.8 per cent of its urban population. This shows the higher concentration of urban population in fewer big cities. However, in North East, the population distribution is not as skewed as the country because of the predominance of small and medium class towns (Table 2).

Table: 2 Class-wise number of towns and percentage share of urban population in the towns of India and North East.

Size Class of Towns	India		North East India	
	No. of Towns	% Population	No. of Towns	% Population
I	393	68.67	10	35.63
II	401	9.67	12	12.33
III	1151	12.23	47	23.01
IV	1344	6.84	74	17.83
V	888	2.36	80	9.56
VI	191	0.23	27	1.64

Sources: (i) Data on towns of India has been collected from Sivaramakrishnan K.C,et.al (2005), 'Handbook of Urbanisation in India: An Analysis of Trends and Processes, Oxford University Press.
(ii) Data on North East is computed from Town Directory, Census of India, 2001.

Urban backwardness in the NER is quite predominant with only 10 Class I towns and 12 Class II towns and rest all are small towns. However, population sharing the class III, IV and V is better than Country as a whole. Class VI towns remain unattractive to the population.

Access to Urban Basic Amenities in Different Size Class

In order to understand the availability of urban basic services in the region, a size- class analysis is done in the following section. For urban basic amenities, water supply, sanitation and electricity are considered.

Water Supply

The important sources of drinking water considered are: tap, hand pump, tube well, well and other sources like lakes, pond, springs, river etc. are put in one category as 'all others'. While doing this categorization it was felt that the source which involves treatment of water or underground water should be considered as safe source of drinking water. Safe water refers to water supplied from the covered sources such as through taps, tube wells and hand pumps. Water from uncovered or surface water sources such as springs, rivers, tanks and ponds are not considered safe. The distribution of households by availability of different amenities in the size class towns of NER is presented in Table 3.

Table 3: Distribution of Household by sources of Drinking Water

Size Class of Towns	Source of Drinking Water				
	Tap	Hand pump	Tube well	Well	All Others
I	46.62	22.04	4.85	17.70	8.79
II	35.67	17.84	4.16	35.89	6.45
III	40.59	27.39	3.24	14.81	13.96
IV	37.37	23.25	5.65	18.93	13.88
V	39.23	23.01	4.44	14.97	18.35
VI	33.91	20.54	7.59	8.78	29.17

It is found that there exists a large scale inequality in the distribution of basic services in general and drinking water and sanitation in particular. Tap water is usually considered as more reliable and hygienic than others like tube wells and hand pumps which always do not supply safe water. Class I cities have the highest percentage of households with tap water (46.62) whereas one-third of the households in class VI towns also have access to tap water. There is no group of towns where at least half population has access to tap water. Also, there is substantial subsidy available when water is supplied through taps which is almost negligible in water supplied through tube wells and hand pumps. Irrespective of the size the town, access is less in north-eastern cities. In terms of water through hand pumps, it is the highest in Class III towns with 27.4 per cent of the households having access to

hand pumps and lowest is in Class II towns (17.84%). The percentage share of households with this facility varies between 18- 20 per cent size class towns. The percentage of tube wells is very low in all categories of towns. There are more households with wells than tube wells. This may be because of higher cost of tube wells and good ground water storage in the region. This also indicates that inadequate supply of water through taps and hence, the population has to depend on other means for water which is mostly a private or personal initiative. It is interesting to note that there is higher percentage of households in the category of 'All Others'. Its share is higher than tube wells and wells in almost all categories of towns. But it is definitely highest in the lower order of towns. It is highest in Class VI towns (29.17) and lowest in Class II towns (6.45). Here it can be sited that the wells in the south and the springs in the more mountainous NER are a major source of water supply providing potable water but as per government definition, they do not come under the category of 'safe' as they are not covered sources. It is true that the towns in lower size class are located in more hilly regions where fresh surface water is available. Also the rugged terrain hinders reaching tap water to most of the households. The terrain condition works as important determinant of the households with access to water from such open sources.

Sanitation

Sanitation facilities are important basic amenities in urban areas, as it affects the standard of living, health condition and well- being of individuals. For the understanding of sanitation facilities in the towns of North East, the households in the following categories are studied – households with bathroom facilities, households with access to different types of latrines like pit latrine, water closet and others and household with no latrine (Table 4).

Table 4 : Households having access to Bathroom and Toilet facilities

Size Class of Towns	Households having Bathroom within the House	Type of Latrine within the House			
		Pit Latrine	Water Closet	Other Latrine	No Latrine
I	60.0	22.8	63.9	10.4	2.8
II	52.7	28.3	47.2	18.8	5.6
III	49.9	42.4	40.1	11.3	6.2
IV	43.0	45.2	35.9	10.7	8.1
V	35.8	51.1	30.9	9.8	8.2
VI	42.8	53.0	32.0	8.6	6.4

Being the highest order of towns, the Class I cities have better housing facilities and this may be the reason for more households (60%) having bathrooms. And their share decreases with the lower order of towns. It is found to be lowest in the Class V towns (35.87 %), though the share does not vary much across all size class towns.

Most of the household have access to some form of latrines whether modern or traditional. Pit latrine, which is not very hygienic in urban areas, is an unclean form of latrine and is found to be the highest in the Class VI towns (53%). This is because such toilet facilities are feasible only where availability of open land is there. Such latrines are found to be lowest in Class I cities with only 22.85 per cent of the household using such toilets. The usage of pit latrines seems to increase with lower order of towns. Pit latrines are contrasting the concept of hygiene especially when huge proportion of population is dependent on underground water as source of drinking water.

Latrines with water closets are considered as the most hygienic. With 63.93 per cent of the households, the Class I cities have the highest concentration of latrines with water closet. And with lower order of towns the share of such latrines also decreases. It's the lowest in Class V towns with only 30.93 per cent of households having such latrines. The category of 'Other Latrines' is also visible in the urban areas, even though in a smaller number. It is highest in Class II towns (18.79%) and lowest in Class VI towns (8.59%). These type of latrines are found in most of the states in the NER because of the prevalence of traditional or kutcha type of latrines in the region. Households with no latrines are less but signify open defecations. This also is more in lower order towns.

Source of Lighting

The most important source of lighting is through electricity, which is mostly based on government function. So, its higher availability in towns would reflect the priorities of the state governments. The data on sources of lighting are given by Census into 3 categories: electricity, kerosene and others. Since the data are collected on major available source, it does not include multiple source of lighting. In north east, the households with other source of lighting (non-conventional) and no lighting are negligible. Table 5 shows the sources of lighting in different categories of towns.

In spite of the hilly terrain with lots of monsoon rain there is quite good coverage of electricity in all the categories of towns. So, the region is well lit by electricity. There is highest concentration of households with electricity in the Class I towns (84.79 %) and it declines as we move towards the lower order of towns. But the decline is not substantial. With 70.64 per cent of households with electricity, Class V has the lowest availability. An interesting feature to be noted here is that, as the level of availability decreases with lower order of towns, it rather increases to 75.6 per cent for Class VI towns. Kerosene, a petro-product oil used for lighting lamps is another source in the urban households. It is considered to be a fuel for the poor and hence it is available at subsidized rates. Usage of kerosene oil reflects the condition of unavailability of electricity and also the unaffordability of

Table 5 : Households by Different Sources of lighting

Size Class of Towns	Sources of Lighting(%to total HH)			
	Electricity	Kerosene	Others	No lighting
I	84.79	14.49	0.56	0.16
II	81.87	17.18	0.54	0.41
III	79.00	20.26	0.45	0.29
IV	74.98	24.11	0.51	0.4
V	70.64	28.69	0.55	0.12
VI	75.56	23.66	0.35	0.44

electricity by the economically poorer sections. In Table 5, we find that the highest concentration of households with kerosene is found in Class V towns (28.69%) and the lowest in the Class I towns (14.49%).

In terms of any other source of lighting, seen in the category of 'others', it is found that a very negligible percentage of the urban households use such sources of lighting. But it is alarming, even with very low figures that people cannot afford any kind of lighting source. More alarmingly, their concentration is the highest in Class I towns with nearly one percent population.

Relationship between Socio - Economic Characteristics and Level of Amenities

The following section tries to understand whether certain socio- economic and demographic characteristics bear a significant relationship with the availability of urban basic amenities in the region. The level of amenities is indicated by the index of amenities calculated for each urban centre in the NER. This index gives us a composite picture of the level of amenities in the region. A question that arises - Can socio-economic characteristics determine the availability of basic urban services? Or what is the relationship of these socio- economic and demographic characteristics on the availability of these amenities?

For the present study, the relationship is studied through a correlation matrix for two groups of towns separately. First group consists of the size class towns of I, II and III whereas Second group consists of IV, V and VI. This division has been made keeping in mind the variation in the distribution of towns in various size classes in the NER.

Socio-Economic and Demographic Characteristics And Urban Amenities In Size Class Towns of I To III

While discussing the relationship between socio-economic and demographic factors and its relationship with availability of the three amenities considered in the present task, composite index of the amenities has been computed. The Index is a composite score (Z-score) of the available amenities in the towns giving an overall picture of amenities in the individual towns. Hence, studying the socio-economic and demographic variables in relation to Z-score will give us a broad understanding of the relationship it makes in the region.

Table 6 : Relationship between socio- economic and demographic variables with Index of Amenities in size class towns of I – III.

	GR_01	density	sex_ratio	% _lit	%_TW	%_FW	%_W_HHI	%_W_OTH	Z-score
GR_01	1	.058	-.141	.067	-.105	-.207	-.036	-.030	-.054
density	.058	1	.103	.004	-.050	-.186	.176	.256(*)	.121
sex_ratio	-.141	.103	1	-.033	.215	.467(**)	.185	-.174	.279(*)
% _lit	.067	.004	-.033	1	.044	-.072	-.237	.459(**)	.100
%_TW	-.105	-.050	.215	.044	1	.807(**)	.491(**)	.008	.230
%_FW	-.207	-.186	.467(**)	-.072	.807(**)	1	.466(**)	-.356(**)	.326(**)
%_W_HHI	-.036	.176	.185	-.237	.491(**)	.466(**)	1	-.270(*)	-.058
%_W_OTH	-.030	.256(*)	-.174	.459(**)	.008	-.356(**)	-.270(*)	1	.049
Z-score	-.054	.121	.279(*)	.100	.230	.326(**)	-.058	.049	1

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).
Note: % _lit – percentage of total literates
% _F_lit – percentage of female literates
%_TW – percentage of total workers
%_FW – percentage of female workers
%_W_HHI – percentage of workers in Household Industries
%_OTH_W – percentage of workers in Other Sectors

In the correlation matrix, it has been found that Z-score is significantly correlated to only two of the socio- demographic variables, i.e., sex ratio and percentage of female workers. The percentage female workers show a positive correlation with the Z-score and are highly significant at one per cent level. The plausible reason for such significant correlation is that with increasing involvement of woman in economic activities, they are able to create better facilities for fulfilling the basic requirements for the household. And with their greater involvement in the workforce, they are able to contribute and enhance household income (Kundu, 2002; Shaw, 2007). This probably is helpful for accessing such facilities in a larger extent.

It is found that sex ratio is also positively correlated to the Index of Amenities with the correlation coefficient value of 0.279. It is significant at 5 per cent level. Sex ratio in urban areas is used as a proxy indicator to decipher sex selective migration where higher sex ratio indicates lesser in-migration and lower sex ratio indicates more male in-migration. The cities and large towns of NER experienced less sex selective migration. This weak stream of migration as well as low population density does not allow the development of slum or slum like housing in any town and leads to better availability of amenities. Contrary to the easy-to-establish negative relationship between population growth and availability of services, the relationship did not stand significant. Situation in the NER is very different as historically urbanization was Assam centric. Tea plantation and natural oil extraction based activities were prominent until recent past. Most of the cities did not get enough time to give rise typical to developing countries slums.

Socio-Economic and Demographic Characteristics and Urban Amenities in Size Class Towns of IV To VI

It is found that the relationship of socio-economic and demographic characteristics is more significant in the category of small towns than in the big towns. Positive correlation with high significance is found for percentage literates, percentage female literates and percentage HH workers and percentage of workers in other sector. A highly significant relationship is observed between percentage literates and Z- score. Percentage of female literates also has positive association with Z- score. The correlation coefficient is 0.519 and is significant at 99 per cent level of significance. This positive association indicates that an increase in the literate population, particularly female literacy would lead to increase in the availability of amenities. A positive relationship with percentage workers in 'Other Sector' indicates that with the increase in the services sector the availability of amenities is expected to improve. It is important to mention here that most of the low category towns in NER are administrative headquarters. Economic base of those urban centres are mostly service sector.

Negative correlation with low coefficient is found between Z score and sex ratio and workers in HH industries. Though the coefficient values are low, they are significant at 1 percent level. However, drawing any blanket conclusion for such a diversified region may be misleading.

Conclusion

The paper reveals that the distribution of households, in terms of access to basic urban amenities in the towns of NER is very uneven which is not very different from any other state of India. The variation can be observed across size class of towns, as we notice that higher order towns exhibit greater availability than the lower order towns. The reasons behind that unevenness, if explored, would vary. Class I towns in the region are developed in plane region, which allows the city to grow as well as to provide basic services. The lower order towns are serving mostly administrative purpose and are located in rugged terrain. The locational disadvantages limit the city to grow and hinder the services to

Table 7: Relationship between socio- economic and demographic variables with Index of Amenities in size class towns of IV to VI

	GR_91_2001	density	sex_ratio	% _lit	% _F_lit	%_TW	%_FW	%_W_HHI	%_OTH_W	Z -score
GR_91_2001	1	-.016	.016	.056	.061	-.008	.023	-.018	.047	.145
Density	-.016	1	-.025	.012	-.047	-.333(**)	-.326(**)	-.010	.342(**)	-.009
sex_ratio	.016	-.025	1	-.190(*)	.228(**)	-.033	.340(**)	.394(**)	-.396(**)	-.309(**
% _lit	.056	.012	-.190(*)	1	.881(**)	.167(*)	-.022	-.132	.175(*)	.615(**)
% _F_lit	.061	-.047	.228(**)	.881(**)	1	.139	.120	-.056	-.010	.519(**)
%_TW	-.008	-.333(**)	-.033	.167(*)	.139	1	.893(**)	.055	-.754(**)	.075
%_FW	.023	-.326(**)	.340(**)	-.022	.120	.893(**)	1	.193(*)	-.879(**)	-.066
%_W_HHI	-.018	-.010	.394(**)	-.132	-.056	.055	.193(*)	1	-.286(**)	-.357(**
%_OTH_W	.047	.342(**)	-.396(**)	.175(*)	-.010	-.754(**)	-.879(**)	-.286(**)	1	.248(**)
Zscore	.145	-.009	-.309(**)	.615(**)	.519(**)	.075	-.066	-.357(**)	.248(**)	1

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
Note: % _lit – percentage of total literates
% _F_lit – percentage of female literates
%_TW – percentage of total workers
%_FW – percentage of female workers
%_W_HHI – percentage of workers in Household Industries
%_OTH_W – percentage of workers in Other Sector

reach larger population. It is also found that there is a strong and significant relationship between the availability of amenities and some of the socio- demographic characteristics of towns. But contrary to the findings of old cities in India, population growth and densities are not significantly deciding the availability of amenities. Nevertheless, the basic amenities are requirement of good living and mostly delivered by the government or are governed by government policy. Socio-economic and demographic conditions only ignite the demand and monitor the efficient delivery of the same.

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