

Migration patterns and its impact on Urbanization and urban housing. A study of Hyderabad metropolitan area.

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ABSTRACT

Rapid Increase in population accompanied with migration are leading to the growth of urban areas. Urbanization is a well-known scenario of a combination of natural population growth and immigration excluding total deaths and emigration. All the metro cities are experiencing immigrations from all over India. Even though state level migration data is available with Census of India, city level data has still been untraced. This research is an attempt to understand migrantflow patterns along state wide and district wide within Telangana. This is mainly to identify the states from which Hyderabad is expecting migrants at India level and to identify major districts offering migrants at district level within Telangana. Concluding with major districts that are offering migrants to Hyderabad, and integrating with the factors contributing to migration to formulate draft proposals. With the increase in population density creates stress not only on urban housing but also on physical and social infrastructure. Cities are experiencing urban housing shortage for decades and increase in urbanization is pushing the sector into further crisis.

KEYWORDS: India, urbanization, migration pattern, urban housing, GIS.

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I. INTRODUCTION

Almost all the Indian cities are experiencing urbanization in the last few decades. Increase in population causing in growth of population density and choking the existing infrastructure. To accommodate the incoming population and to ease out the stress, to channelize the haphazard urban morphological expansion, municipal jurisdictions were spreading beyond their limits to increase the size of cities.

The primary reasons for migration has always been the 3 E's (Education, Employment and Empowerment). While lack of resources at rural villages are acting as a pushing factor for migration and opportunities at the urban areas are pushing factor for immigration. In 1900s, the total urban population was not more than 250 million which is less than 15% of the total. A century later, in 2000s, this urban population had increased to almost 2.9 million, which is about 47% percent of total. This clearly shows an increase of ~70 % in one century.

II. GLOBAL SCENARIO

Over the past six decades, global urbanization has been increasing at an exponential rate. According to UNDESA, in 1950 more than 70% (two-thirds) of world population lived in rural settlements and less than 30% (remaining one-third) in urban settlements. By 2014, 30% has become 54% and according to the projections to 2050, 66% will be in urban settlements and only 34% in rural settlements.

Nature of urbanization pattern varies within developed nations and developing nations. It has been observed that developing nations tend to exhibit higher urbanization rates compared to developed nations.

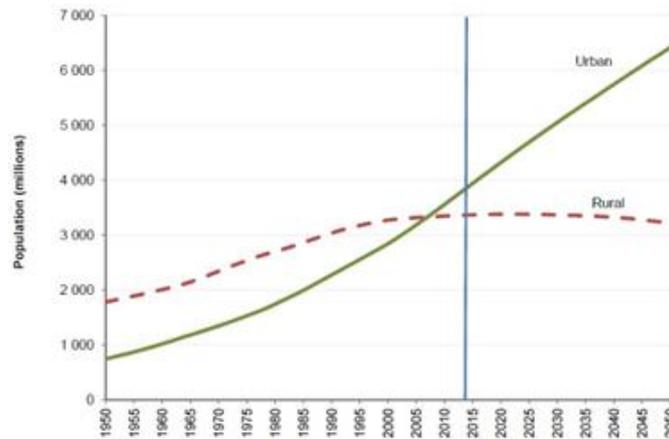
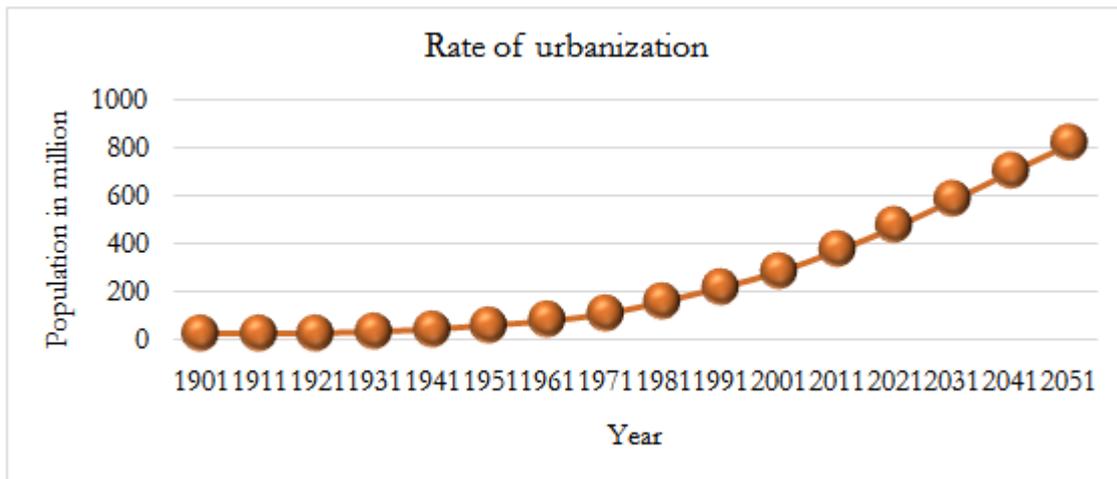


Figure 1: The world's urban and rural populations, 1950-2050 (Source: (World Urbanization Prospects 2015))

III. INDIAN SCENARIO

Not only the world statistics, but also the statistics of India shows a rapid urbanization in the past century. It has been observed that the urbanization rate in India has been increased from 17.6% in 1951 to 23.7% in 1981 to 27.8% in 2001. By 2010, it has increased by 30% and by 2050 it has been estimated to increase by 50% (Rakesh Mohan, Shubhagato Dasgupta 2004). In reference to above percentages, the urban population was about 373 million in 2010, and is expected to be doubled by 2050 to about 814 million. Most urbanized states in India are Tamil Nadu with 43.9%, Maharashtra with 42.4% and Gujarat with 37.4%. It takes us to surprise to notice that India has 3 mega cities out of world's 21 mega cities as per census 2011, Mumbai stands with 19 million, Delhi with 15 million and Kolkata with 14 million. India has 23 large cities in 1991 and within a decade this number has almost doubled to 40 by 2001.

Figure 1: Rate of urbanization over the course of time. Source: (Rakesh Mohan, Shubhagato Dasgupta 2004)



IV. FACTORS CONTRIBUTING TO URBANIZATION

Population growth in urban regions has several interacting forces that help define the urban morphology of a city. Population growth can be both a determinant and a result of development/ spread of urban form over time. A short list of contributing factors might include city location and surrounding topography (such as coastline, mountain range, or river), economies of scale brought by agglomeration, population make-up and cultural preferences, "pull" factors for migrants, urban planning (infrastructure, transportation, etc.), and even the state's institutional history with regard to the organization of its system of cities (Besussi, Elena, Nancy Chin, Michael Batty 2010).

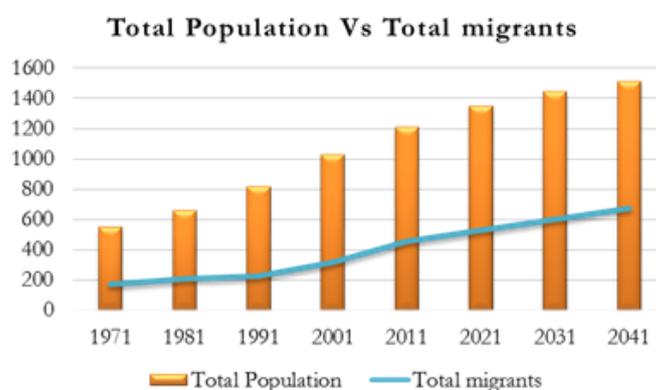


Figure 3: Total population Vs total migrants. . Source: (Migration TablesD1,D1(Appendix), D2 and D3 tables 2001) (Ministry of Finance 2019)

An attempt has been made to understand the overall population along with migration over the past 7 decades. It can be seen evidently that migration has always coexisted with population growth. It is interesting to note that migration has took pace from 1990s and it is expected to project along with population growth, ultimately increasing urbanization exponentially. Migrants for the year of 2021, 2031, and 2041 has been projected using Arithmetic Increase method.

According to Census of India 2001, reasons for migration (during 1990-2001) are

Table 1: Reasons for migration as per Census 2001.

Source: (Migration TablesD1,D1(Appendix), D2 and D3 tables 2001)

S. No	Category	Population (in million)	Percentage (%)
1	Total Population	1028.6	
2	Total migrants by last residence	307	30
Reasons for migration (during last decade)			
1	Work/Employment	14.4	14.7
2	Business	1.1	1.2
3	Education	2.9	3.0
4	Marriage	43.1	43.8
5	Moved after birth	6.5	6.7
6	Moved with Household	20.6	20.6
7	Others	9.5	9.5

V. CHALLENGES

Cities occupy only 2% of the world’s land but consume 75% of its resources. They produce a similar percentage of its waste with devastating results on the environment and health of their citizens(Asian Development Bank 2013).Meeting the needs of India’s urban population has always kept policy makers on toes. World Bank has categorized and listed out these challenges to understand Urbanization in detail.

5.1 Planning

- Lack of modern planning framework techniques within urban local bodies.
- Rigid master plans and restriction in zoning offers limited flexibility for any future growth or modifications.

5.2 Service delivery

- Multiple local bodies working on single infrastructure leading to unclear accountability and hassles in its maintenance.

- Age old grey infrastructure is still favored over environmental friendly solutions and financially viable options.
- Lack of proper tax collection system is pushing Service providers to rely on urban local bodies for the infrastructure operation and maintenance.
- Lack of regulatory system to set tariffs, decide on subsidies, collection of taxes, and check on service quality is resulting in unaccountable and non-taxable usage of infrastructure.

5.3 Infrastructure

- Urban local bodies are not generating the revenues needed to maintain infrastructure over the course of time, nor renewing it.
- A great need of urban transportation system to be more inclusive and pedestrian oriented rather than vehicle oriented.

5.4 Environment

- Cities are choking up with exploding population, expending limits, insufficient and aged infrastructures leading to deteriorating urban environment.

5.5 Status of Urban Housing

As per census 2011, total number of households in urban areas has been increased from 53.7 million to 78.9 million from 2002 to 2011 (Handbook of Urban Statistics 2019)

As per census 2011, the total urban population in 2001 was 285 million and in 2011 was 373 million. It has been observed that the total slum population in 2001 was 52 million and in 2011, it has been increased to 65million. This shows a decadal growth rate of 25 % in urban slum population with an added population of 13million into slums within a span of 10 years. (Primary Census Abstract for slum 2011).

Housing sector has always been facing challenges such as, Limiting floor space index ratios restrict future accommodation of urban population and thereby increasing property values. Outdated rent control regulations and property taxes collection system. Poor access to mortgage finances and micro financing policies are limiting low income groups on improving the housing scenario. Urban local bodies with weak financing system and service providers are limiting housing sector from expanding and catering the migrated population. Insignificant planning, policies, and regulation loop holes are resulting in growth of slums and inefficient housing sector.

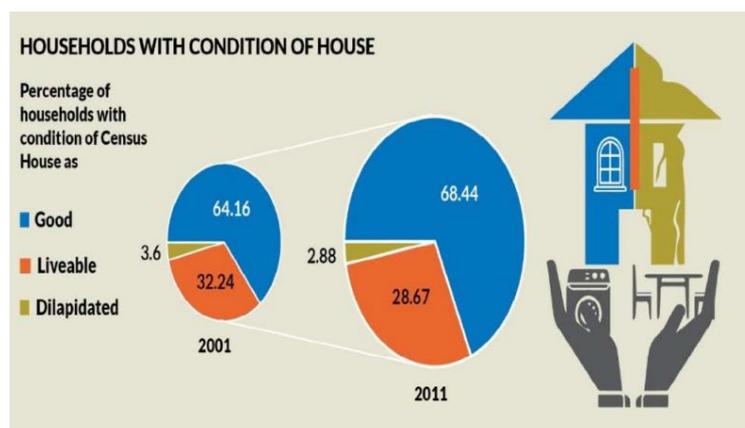


Figure 2: Housing condition

VI. HOUSING SHORTAGE

Migration and rapid inflow of population pushes the low income groups into slums and quartered settlements. Rising land prices within urban areas are inducing poorer communities and economically weaker sections to settle in marginal lands with poor housing infrastructure, congestion and obsolescence. There has always been a huge gap between demand and supply of housing sector both in terms of quantity and quality, which the policies are failing to address. According to the Ministry of Housing and Urban Poverty Alleviation (MHUPA), India's housing shortage was estimated to be nearly 18.78 million households in 2012. The report also highlighted that 1 million households were living in non-serviceable katcha houses, with over half a million households' homeless (KPMG 2012). This shows out of total population in 2012, a quarter sized population i.e., **"25% of the urban population"** is in a grave need of proper housing stock.

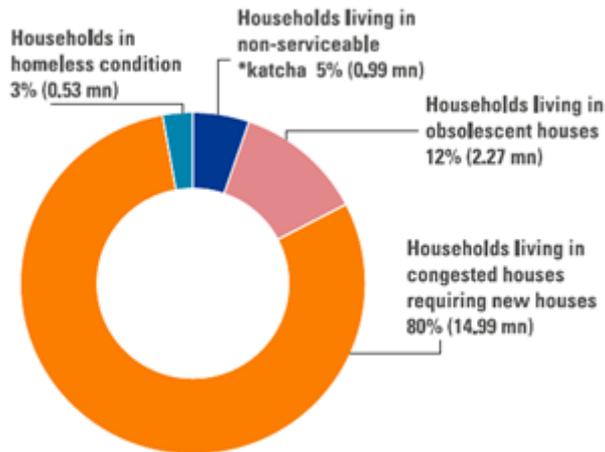


Figure 5: Urban housing shortage 2012

VII. SCENARIO OF HYDERABAD

To understand migration patterns and its influence on Hyderabad’s urbanization, an online survey has been conducted over a period of 2 weeks. An overall of 693 respondents were participated of random age, gender, education qualification, occupation levels, etc. Questionnaire parameters were so choose to understand several aspects of migration at middle income and high income groups primarily.

Table 2: Parameters of survey Questionnaire

S. No	Parameter	Intent of selection
1	Generation of migration	Which generations supported urbanization the most and its variance across generations.
2	Marital status	Gender based migration reasons
3	Reason of moving	Pushing factor to change a place
4	Employment after moving	Source of income after moving
5	Family primary occupation before and after migration	To understand the change of basic occupational sector.
6	Economic status, Housing status	To evaluate the betterment of living standards, housing after migration
7	Native place	To highlight major states and districts of emigration.
8	Age, gender, educational level.	Basic information

7.1 Immigration percentage

Out of the total respondents, it has been observed major share (i.e., about 50%) of the immigration is from within the parent state, 40% is from the recently divided twin state (i.e., Andhra Pradesh) and remaining 10 % from the neighboring states. This shows majority of people are comfortable and opting to move within the parent and twin states.

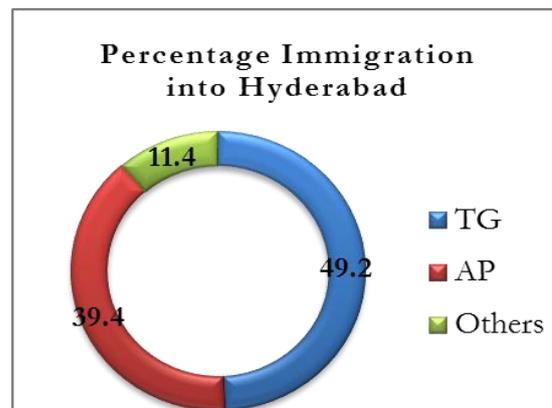


Figure 3: immigration into Hyderabad

7.2 Influence of Gender on migration

From the survey results, an attempt has been made to understand the relation between Gender and reasons for migration. For education, population is migrating in search of better education irrespective of gender. Both the male and female populations are moving for better education.

For employment, male population is observed to be moving at a higher rate than female population. It can be before the marriage or after the marriage. Whereas, female population is migrating at an exponential rate after marriage to a metropolitan city (Hyderabad in particular).

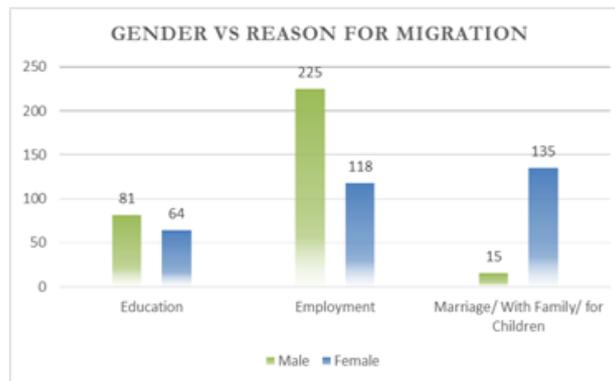


Figure 7: Gender Vs Reasons of migration

7.3 Impact of Generation on migration

On the same lines, further attempt was made to understand the relation between Generation and reasons of migration. From the figure, it can be analyzed that the millennial generation (1980-1994) has encouraged migration for employment. It can be in search of employment sector change, or availability of public jobs, or in search of better living standard for the family.

The following generation, i.e., iGen/GenZ (1995 - 2012) has encouraged migration primarily for education followed by employment. This can be attributed to mainly **fee-reimbursement scheme** started in those years and scholarships

offered made higher education affordable even for a low income group families and this encouraged migration to capital city in search for better education at affordable rates.

On the same lines, the succeeding generation i.e., Gen Alpha (2013- 2025) has been encouraging migrants for employment and migrants after marriage. Migrants after marriage or moving with the family is attributed to female population majorly with the partner or with complete family.

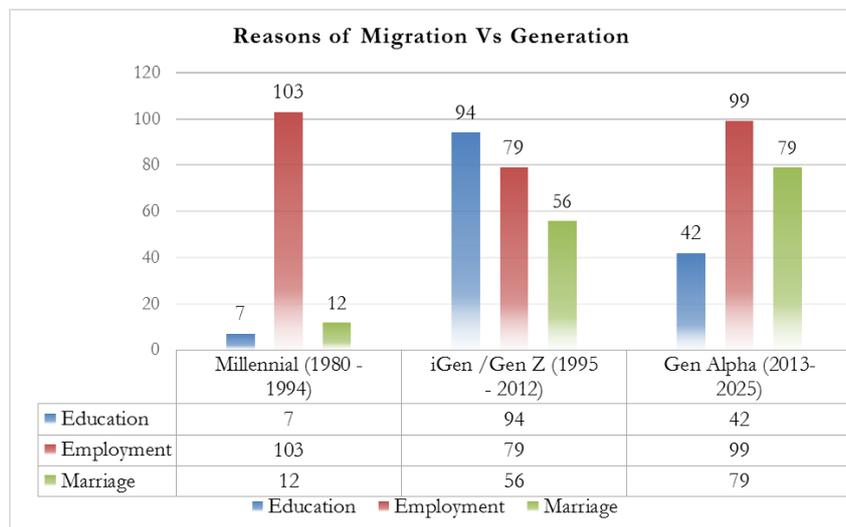


Figure 4: Generation Vs Reasons of migration

7.4 Migration and impacts on status of Housing

Apart from any reason of migration, the first basic need after moving to a new city will be housing security. To understand this, a small relation has been derived between housing before and after moving to Hyderabad. Based on the analysis that 80% of the migrated population has an own house at their native place (irrespective of condition i.e., pucca, semi-pucca or kutchu). In spite of having an own house, 90% has been shown interest in migrating to a metropolitan city with no assurance of an own place of living.

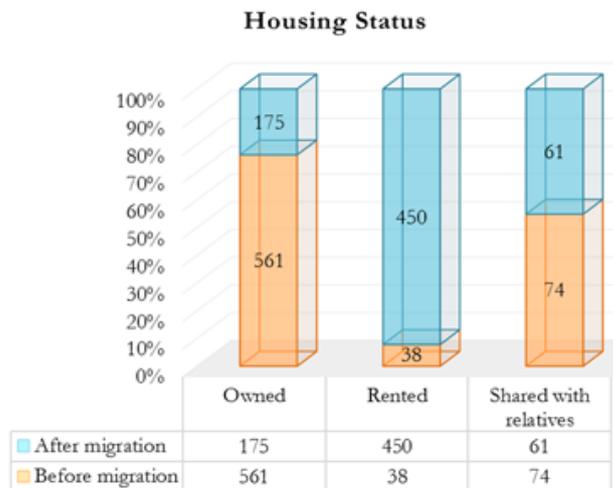


Figure 9: Status of Housing before and after migration

7.5 Change of Employment sector

Analysis clearly shows a significant change in change in sector, basically from primary to others. Primary sector is facing a drastic drop because of migration. Even industrialization/ secondary sector has minimum impact on higher income groups and middle income groups. Increase in tertiary sector can be attributed to the rise of employment opportunities in the sector of Information Technology.

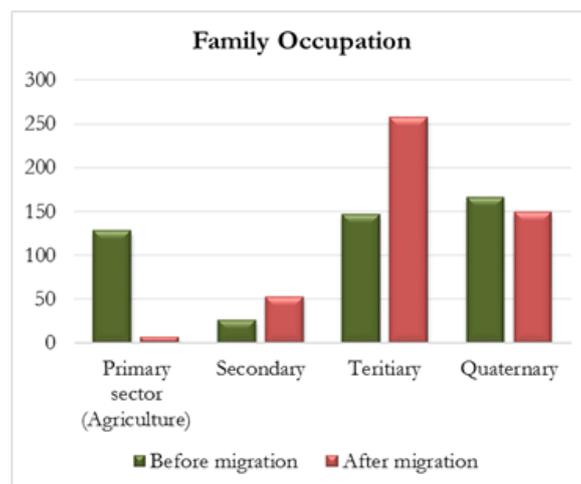


Figure 10: Employment sector of family

7.6 Regression analysis

An attempt to predict a relation between Reasons for migration and Gender, Education status, Generation in which respondent migrated, and employment opportunity soon after moving to Hyderabad.

$$\begin{aligned}
 \text{Reason for migration} = & 1.756 + 0.2989 \text{ Gender (male)} + \mathbf{0.575 \text{ PG \& above}} \\
 & \mathbf{education} + \mathbf{0.474 \text{ Under Graduation}} - 0.338 \text{ Senior (till 12)} \\
 & + 0.371 \text{ Millennial (1980 - 1994)} - 0.089 \text{ iGen / Gen Z (1995 - 2012)} - \\
 & 0.191 \text{ Gen Alpha (2013-2025)} + \mathbf{0.973 \text{ Employed (F/T)}} + \mathbf{0.622 \text{ Student}} \\
 & + \mathbf{0.773 \text{ Self Employed}}
 \end{aligned}$$

From the equation it can be observed that people who are pursuing or pursued higher level of education are willing to migrate to a metropolitan city. **58 percent of the post-graduation** population and almost **50 % of the under graduate** students have moved to Hyderabad in search of education or employment. Equation is inconclusive in terms of Generation to which the migrants belong and the reason of migration, this could imply, irrespective of generation population is been floating to Hyderabad. Equation shows that increase in employment, education and business opportunities will increase the willingness to migrate. As their native places are lacking in better opportunities in terms of both higher/ quality education and employment opportunities.

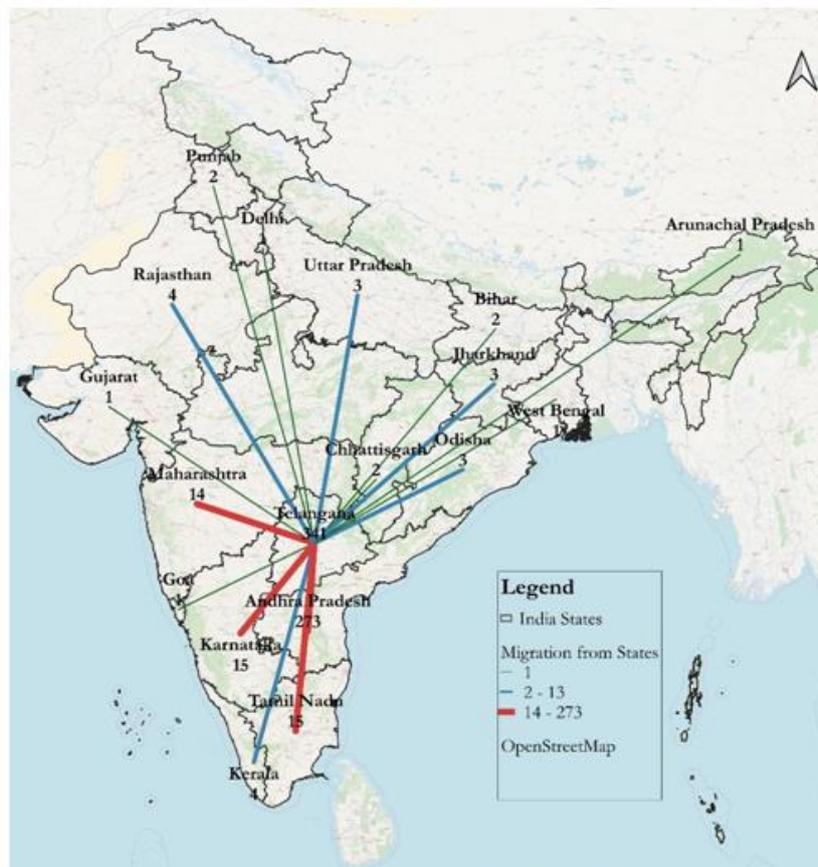
7.7 Migration patterns at India level (Interstate migration)

An attempt has been made to derive patterns of migration within India across the states and districts within Telangana.

Map 1 shows; at the national level, majority of the share is received from Andhra Pradesh followed by neighboring states such as Maharashtra, Karnataka, and Tamil Nadu.

Few reasons that are attracting inflow of migrants into Hyderabad at India level can be drawn from this, such as

1. Concentration of resources, such as second largest Software sector (first being Bangalore), availability of educational facilities, various employment opportunities being a Metropolitan city by itself.
2. Hyderabad is considered as south central, regional similarities offer a sense of belongingness and comfort, encouraging from southern parts the most.

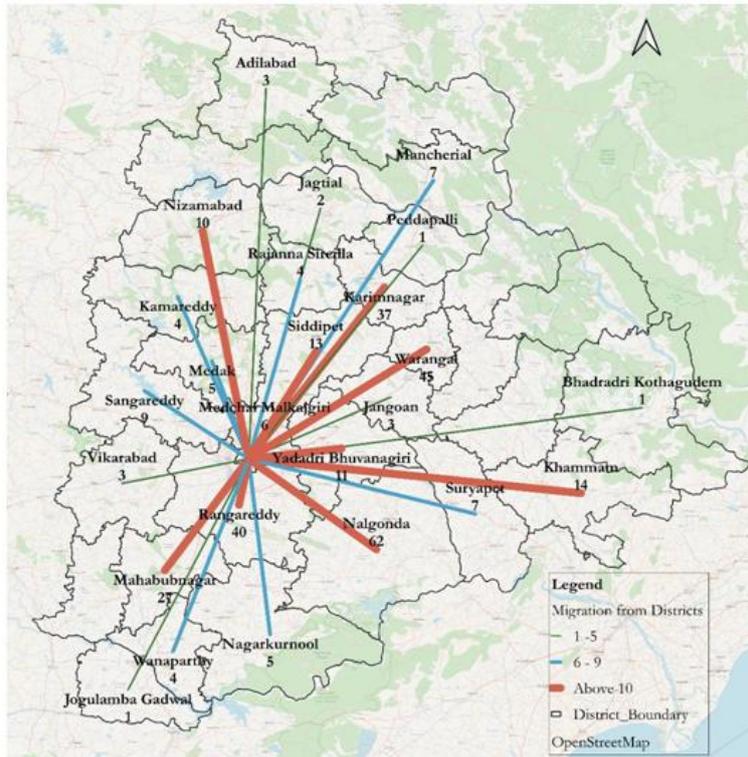


Map 1: Interstate immigration into Hyderabad within India

7.7.1 Migration patterns at district level within Telangana

Following the state level migration details, next attempt was made to understand the migration patterns from all the districts of Telangana. Map 2 shows; at district level, Hyderabad is absorbing immigration from eastern and southern districts of itself.

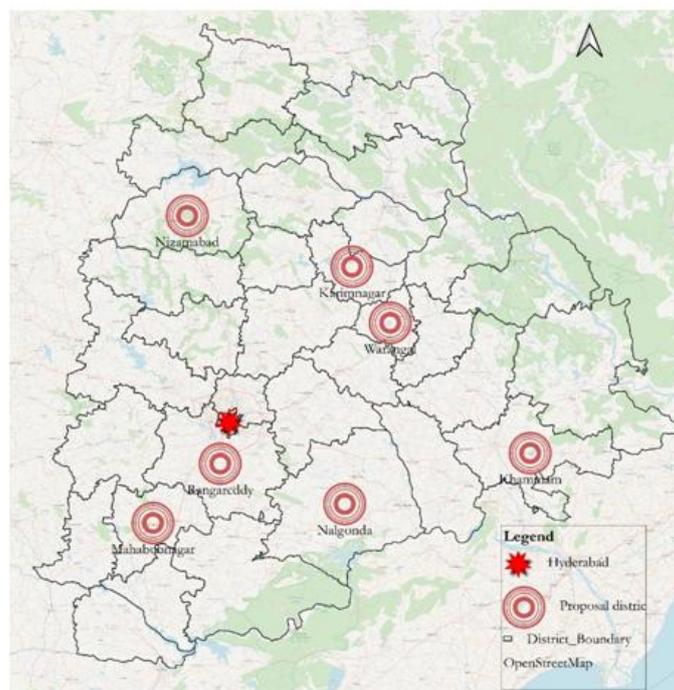
It is interesting to observe that, majority of the migrants are from Tier 2 cities, i.e., potentially upcoming cities like Nalgonda, Warangal, Karimnagar, Rangareddy, Mahbubnagar, and Khammam are the major epicenters for emigration. The observed reasons are in search of Education, Employment, high rates of employability and Empowerment.



Map 2: District level immigration into Hyderabad

VIII. CONCLUSION

From the above analysis and interpretations, it has been shortlisted that the following Tier II cities can be developed with modern education and employment opportunities. Once these areas improve their infrastructure, migration from these districts will automatically reduce to Hyderabad. Map 3 shows the list of districts that can be developed phase wise to minimize the immigration into state capital. Identified districts are; Nizamabad, Karimnagar, Warangal, Khammam, Nalgonda, Mahbubnagar, and Rangareddy.



Map 3: Proposal for further development

From the regression analysis, it has been observed that majority of students are opting for higher educations and better employment opportunities. Providing these two in the above shortlisted locations in phase wise can improve living standards in those districts and discouraging population to move out of parent district and thereby relieving stress on capital district.

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