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A Study of Urbanization Trends in Nashik District: 1981–2011

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Abstract

This study examines the interrelationships among urbanization, industrial development, economic transformations, and demographic changes in Nashik District, Maharashtra, spanning four decades from 1981 to 2011. Utilizing secondary data from the District Census Handbooks, the research employs statistical methods, including Pearson's correlation and Multiple Linear Regression, to analyze demographic shifts and workforce classification. The findings indicate that the district's population more than doubled during this period, with the urban population proportion steadily increasing from 32.23% to 42.53%. This urban expansion is characterized by decentralized growth, evidenced by the increase in total urban centres from 16 to 25, particularly among lower-tier cities and newly emerging census towns. The primary catalyst for this migration is the structural displacement of the workforce, marked by a decline in the primary agricultural sector and a corresponding rise in the secondary and tertiary sectors. Correlation analysis reveals a highly significant positive relationship (r = 0.971) between the growth of "Other Workers" (formal industrial and service sectors) and the pace of urbanization, while the impact of traditional household industries remains negligible. Ultimately, the study concludes that Nashik's urbanization is driven by modern economic shifts, highlighting the critical need for decentralized regional planning and infrastructure development to support emerging urban nodes.

Keywords: Urbanization, Demographic Changes, Economic Transformation, Workforce Classification, Decentralized Growth.

Introduction

Urbanization is a continuously evolving process. Modern urbanization first emerged in Europe following the Industrial Revolution. Driven by industrialisation and the consequent transformations in population dynamics and economic structures the world has witnessed a simultaneous increase in both the rate of urbanization and the sheer number of cities. Although the factors driving urban growth today are of relatively recent origin, these factors appear to vary significantly across different geographical locations and historical periods.

Urbanization is defined as the process of transition from rural to urban areas (Ourng and Rodrigues, 2001). It is not merely the concentration of a population within a specific geographical hub; rather, urbanization is a complex and multidimensional process. The process of urbanization is primarily propelled by economic transformations.

Influenced by physical, cultural, social, religious, and political factors, rural settlements gradually undergo a transformation into urban settlements. However, this transition does not necessarily occur in every rural context. Generally, there is a distinct tendency for people to migrate from rural areas toward urban centres. Consequently, urban areas experience a continuous increase in population. This population growth, in turn, drives the geographical expansion and economic development of urban regions over time. This entire process is termed urbanization.

Urbanization is often regarded as a direct outcome or "offspring" of industrialization. Furthermore, the extent of urbanization serves as an indicator of the level of economic and social development achieved within a specific country or region.

A historical overview of modern urbanization in India reveals two distinct periods:

i). The British Era (or Pre-Independence Period) and
ii). The Post-Independence Period.

During the pre-independence era, Nashik District was traditionally recognized for its agrarian economy. However, in the latter half of the 20th century specifically during the post-independence period Nashik District underwent a series of profound transformations. This transition from an agrarian-based economy toward the modern sectors of industry and services can be viewed as a representative case study of the broader process of urbanization unfolding across the state of Maharashtra. This research paper examines the interrelationships among urbanization, industrial development, economic transformations, and demographic

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changes in the Nashik district during the census years spanning from 1981 to 2011. Through the application of statistical techniques, it was observed that shifts in economic activities contribute to the growth of the urban population.

Objective

To study the relationship between changes in urban population and classification of workers in Nashik District during the four decades from 1981 to 2011.

Data and Methodology

The present research is primarily based on secondary data. All demographic information on urban population, number of urban centres and classification of workers etc. has been taken from the District Census Handbook, Nashik published by the Government of India for the years 1981, 1991, 2001 and 2011.

Secondary sources have been primarily used to study the urban population characteristics of Nashik District. For this, the District Census Handbooks of the years 1981, 1991, 2001, and 2011, published by the Government of India were used.

To prepare maps based on demographic data, Survey of India toposheets were primarily used as base maps. For information regarding roads and railways in the study area, maps from the District Planning Series published by NATMO (National Atlas & Thematic Mapping Organisation, Kolkata) were used.

Moving beyond purely descriptive demographic observations, to arrive at concrete and empirical conclusions, this research paper uses the following statistical methods:

i). **Correlation analysis (Pearson's r):** Pearson's correlation coefficient (r) method is used to examine the magnitude and direction of the linear relationship between various variables in the economic sector and the pace of urbanization.

ii). **Multiple Linear Regression:** Ordinary least squares (OLS) model is used to examine the relationship between the dependent variable (percentage of urban population, Y) and the independent variables (workers in services/other sectors, X1; household industries, X2).

Results and Discussion

1. Growth in Population and Density

In 1981, the total population of Nashik district was 2,991,739, and the population density stood at 193 persons per square kilometre. By 2011, this population had more than doubled, reaching 6,107,187, resulting in an increase in population density to 393. Although the district's overall decadal growth rate gradually declined from 28.73% (1991) to 22.30% (2011), the proportion of the population residing in urban areas continued to rise steadily. (Table 1)

Table 1: Demographic comparison between Maharashtra State and Nashik District (1981 – 2011)

		1981	1991	2001	2011
Total Population	Maharashtra	62784171	78937187	96878627	112374333
	Nashik	2991739	3851352	4993796	6107187
Decadal Growth Rate	Maharashtra	24.54	25.72	22.72	15.99
	Nashik	26.28	28.73	29.66	22.3
Density	Maharashtra	204	257	315	365
	Nashik	193	248	322	393
Urban Population (%)	Maharashtra	28.55	38.69	42.43	45.22
	Nashik	32.23	35.55	38.80	42.53

Source: *DCH books of concern years*

2. Expansion of Urban Geographic Areas

In 1981, Nashik's urban population constituted 32.23% of the total population. By 2011, this figure had risen to 42.53%. This increase of 10.3 percentage points in the proportion of the urban population reflects the migration of millions of individuals toward urban centres, or their natural absorption into these centres. (Table 2)

Table 2: Tahsil wise Urban Population (%) and decadal growth in Nashik District during 1981 to 2011

Sr. No.	Tehsil	Urban Population (Percentage)				Decadal Growth in Urban Population		
		1981	1991	2001	2011	1981-91	1991-2001	2001-11
	Nishik District	31.02	35.55	38.8	42.53	4.53	3.25	3.73
1	Surgana	---	---	4.24	3.56	---	4.24	-0.68
2	Kalvan	---	---	---	---	---	---	---
3	Deola	---	---	---	---	---	---	---
4	Baglan	2.24	9.34	10.46	10.07	7.1	1.12	-0.39
5	Malegaon	27.92	52.82	57.78	61.48	24.9	4.96	3.7
6	Nandgaon	7.46	40.25	40.45	35.81	32.79	0.2	-4.64
7	Chandvad	1.07	9.06	9.6	10.74	7.99	0.54	1.14
8	Dindori	---	---	---	---	---	---	---
9	Peth	---	---	---	---	---	---	---
10	Tryambakeshwar	---	---	7.19	7.16	---	7.19	-0.03
11	Nashik	48.46	81.93	87.47	89.98	33.47	5.54	2.51
12	Igatpuri	2.2	19.08	22.67	22.02	16.88	3.59	-0.65
13	Sinnar	2.36	11.35	10.83	18.85	8.99	-0.52	8.02
14	Niphad	5.23	16.05	13.3	15.08	10.82	-2.75	1.78
15	Yeola	3.05	18.4	18.35	18.38	15.35	-0.05	0.03

Source: *DCH books of concern years*

This growth was not limited to a single metropolis; rather, it was highly dispersed. Statistics pertaining to the classification of cities underscore the growth (expansion) in the structure of urban centres. (Table 3)

Table 3: Growth of urban centres in Nashik District during 1981 to 2011

Census Year	City Classification					Total Urban Centres
	I	II	III	IV	V	
1981	2	2	5	4	3	16
1991	2	1	7	5	2	17
2001	2	2	9	3	2	18
2011	2	4	8	5	6	25

Source: *DCH books of concern years*

Throughout this entire period, while 'Class I' cities (those with a population exceeding 100,000 e.g., Nashik Municipal Corporation and Malegaon) remained stable as two distinct urban agglomerations, the actual geographical expansion occurred primarily within lower-tier cities. By 2011, a significant increase was observed in the number of cities falling under the 'Class III' (population: 20,000 to 49,999) and 'Class V' (population: 5,000 to 9,999) categories (with an increase of 8 and 6 centres, respectively). Consequently, newly emerging "Census Towns", such as Dyane, Soygaon, and Surgana evolved from rural backgrounds and transformed into functional urban sub-centres; this pattern illustrates a decentralized form of urban expansion, rather than a concentrated growth cantered around a single major hub. (Fig. 1)

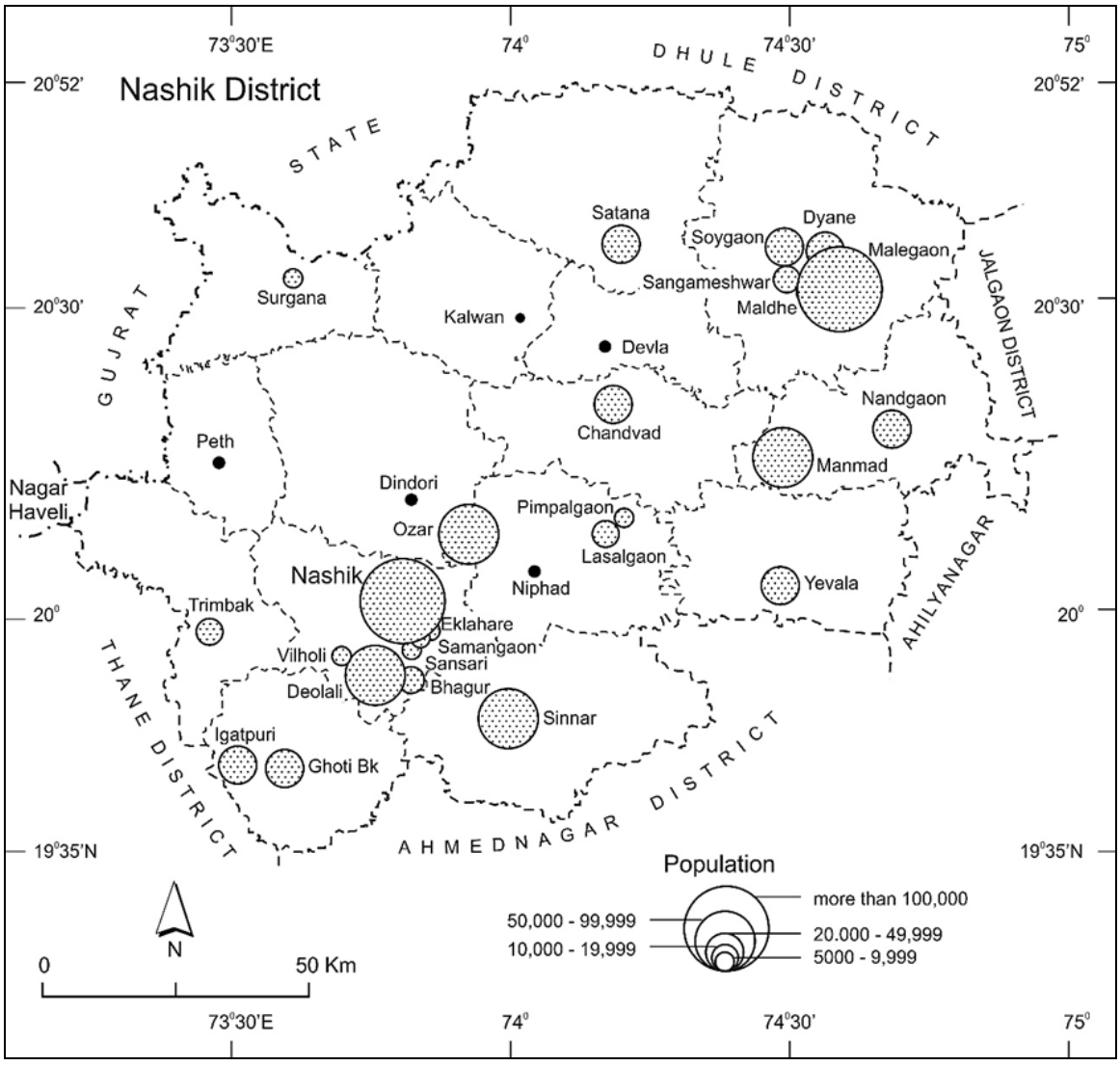

Fig 1: Nashik District – Urban Centres with Population

3. The Symbiosis of Urbanization and Industrial Development

State-led initiatives, such as the Maharashtra Industrial Development Corporation (MIDC) which led to the district being designated as an industrial zone, created a 'gravitational model' of migration. As industrial belts expanded in areas such as Satpur, Ambad, and Sinnar, a demand emerged for highly skilled tertiary-sector management personnel as well as a large-scale secondary-sector workforce.

Statistical data regarding the classification of urban centres corroborates this trend: municipal corporations and cities situated adjacent to these industrial belts exhibited a consistent decadal growth in population. Industrial development acts as the initial 'pull' factor, attracting migrants from rural areas. Subsequently, this influx generates a demand for local service economies (retail, transportation, and education, healthcare), triggering a second wave of urbanization that ultimately solidifies the settlement's status as a Class II or Class III city. 4) Growth in Urban Population Driven by Changes in the Economic Sector

To understand the process of urban population growth in Nashik, it is essential to analyse the structural changes within the employment sectors, specifically, the shift towards the primary (agriculture), secondary (manufacturing/cottage industries), and tertiary (services/other) sectors. (Table 4)

Table 4: Changes in Workers Classification in Nashik District during 1981 to 2011

Census Year	Worker Classification (in %)			
	Cultivator	Agricultural Labourers	Household Industry	Other Workers
1981	42.19	26.6	1.93	29.28
1991	43.30	24.16	1.40	31.14
2001	37.70	24.70	2.20	35.40
2011	35.01	26.43	2.03	36.54

Source: *DCH books of concern years*

i) The Decline of the Agricultural Sector (Primary Sector)

According to the statistics presented in Table No. 4, a consistent decline is evident in traditional agriculture-based occupations. There was a significant reduction in the number of cultivators, dropping from 42.19% in 1981 to 35.01% in 2011. Conversely, the proportion of agricultural labourers remained relatively stable, fluctuating between 24% and 26.6%. Consequently, the total share of workers within the primary sector declined from approximately 69% to roughly 61.4%. This structural displacement of the workforce within the agricultural sector has emerged as the primary catalyst (or driving force) behind urban migration.

ii) The Rising Proportion of 'Other Workers' (Secondary and Tertiary Sectors)

In contrast, the statistics for the category of "Other Workers" reveal a substantial increase. This census category encompasses modern manufacturing industries, trade, commerce, construction, and specialized services. The proportion of 'Other Workers' witnessed a significant rise, climbing from 29.28% in 1981 to 36.54% in 2011.

Notably, traditional "household industries" (small-scale, local manufacturing) remained stagnant and negligible; their share hovered merely between 1.40% and 2.20%. This disparity clearly demonstrates that the growth of Nashik's urban population has not been driven by cottage industries, but rather by formal, large-scale industrialization and a modern service-based economy. As the economic base underwent transformation, the rural population migrated toward the newly emerging 'Census Towns.' In response to the geographical imperatives of modern capital, this migration occurred to secure employment opportunities and wages within the category of "Other Workers."

Statistical Analysis

i). Does urban growth proceed at a faster pace in regions where the proportion of workers in the service sector is higher compared to the industrial sector?

ii). Is there any correlation between the number of urban centres and the overall workforce participation rate?

A statistical analysis of these two hypotheses reveals a highly significant and nearly perfect positive correlation (r = 0.971) between the growth of "Other Workers" (specifically in the service and formal industrial sectors) and the process of urbanization. Conversely, in the case of household industries, this correlation is found to be weak and statistically negligible. This demonstrates that Nashik's rapid urban growth has been driven primarily by the tertiary (service) and formal secondary sectors; consequently, the role of small-scale cottage industries in stimulating the geographical migration of the population has proven to be negligible.

Furthermore, there exists a very strong positive correlation (r = 0.95) between the physical expansion of urban centres and the overall workforce participation rate of the population. The fact that the 'p-value' (0.0515) lies in close proximity to the significance threshold indicates the robust statistical reliability of this conclusion. As new urban nodes (classified as Class III, Class IV, and Census Towns) emerge, they generate micro-economies at the local level; these economies effectively integrate marginal workers and non-workers into the active workforce. This decentralized pattern of urbanization effectively enhances the district's overall economic productive capacity.

Conclusion

i). During the period from 1981 to 2011, urbanization in Nashik district demonstrates a growth trend that is slow-paced yet steady.

ii). The period between 1981 and 2011 witnessed an increase in the number of urban centres within Nashik district. However, this growth was not confined solely to the two cities of Nashik and Malegaon; rather, new urban centres emerged in other parts of the district as well. This implies that the process of urbanization in Nashik district is decentralized in nature.

iii). Statistical data confirms that the tertiary/formal sector (r=0.971) serves as the primary engine driving urbanization; consequently, regional planning initiatives should prioritize the development of commercial IT parks, modern manufacturing zones, and large-scale retail infrastructure. Planners must remain cognizant of the fact that for every percentage point increase in this workforce, a commensurate expansion in urban housing and civic amenities is absolutely essential.

iv). The increase in the number of urban centres from 18 to 25 during the 2001–2011 period coupled with its strong correlation to workforce participation (r=0.948) clearly demonstrates that the development process is no longer confined solely to Nashik city. Funding for infrastructure (including water supply lines, sewage management systems, and road connectivity) must now be channelled more vigorously toward the newly emerging Class III and Class V "Census Towns." Neglecting these suburban or peripheral areas would inevitably lead to the uncontrolled proliferation of slums and result in severe traffic congestion during daily commutes. 5) According to statistical data, fluctuations have been observed in the number of marginal workers (this figure rose to 5.5% in 2001, whereas it stabilized at 3.94% in 2011). In the planning of infrastructure, it is imperative to also take into consideration the workforce that, while serving as a complement to "Other Workers" in the formal sector, is inherently temporary and informal in nature. To this end, it is essential to construct affordable, high-density housing projects, as well as to develop robust public transportation systems that connect rural areas with new industrial hubs.

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