



Social Sciences Spectrum

A Double-Blind, Peer-Reviewed, HEC recognized [Y-category](#) Research Journal

E-ISSN: [3006-0427](#) P-ISSN: [3006-0419](#)

Volume 04, Issue 04, 2025

Web link: <https://sss.org.pk/index.php/sss>



Check for updates

Migration-Driven Urbanisation in South Asia: Insights from Bhawanipatna Town, Odisha, India

Dr. Bisworanjan Behuria¹

Assistant Professor, Faculty in Department of Geography, Maa Manikeswari University, Bhawanipatna, Odisha

Correspondence Author: biswobehuria90@gmail.com

Article Information [YY-MM-DD]

Received 2025-08-20

Revised 2025-09-02

Accepted 2025-10-12

Citation (APA):

Behuria, B. (2025). Migration-driven Urbanisation in South Asia: Insights from Bhawanipatna town, Odisha, India. *Social Sciences Spectrum*, 4(4), 1-11. <https://doi.org/10.71085/sss.04.04.357>

Abstract

Present study examines the nature and magnitude of in-migration to Bhawanipatna town, a rapidly growing town in Kalahandi district, Odisha, India. This study assesses the contribution of urbanisation in this migration process for the historic town. Using secondary data source particularly Census data has been utilized to identify growth patterns. Methods like exponential models has been used to estimate population growth. With the lack of authentic data, population has been predicted for 2021 and 2031 which is crucial for addressing migration issues in the town, urban sprawl and potential risks related to resource depletion. The analysis reveals that migration significantly influence Bhawanipatna's urban expansion, labour market dynamics and socio-economic development. The study underscore how rural-urban migration shaped by historical, social and economic factors, play a pivotal role in small town expansion. The findings provide valuable insights for policymakers to formulate inclusive urban development strategies that balance migration-driven growth with sustainable urban planning for the medium-sized town, Bhawanipatna. The research links the Bhawanipatna experience to the broader South Asian urban transition, calling for integrated planning approaches to harness migration as a tool for sustainable urban development.

Keywords: Urbanisation, In-migration, Exponential Models, Migration-driven Growth, Sustainable Urban Development.



Content from this work may be used under the terms of the [Creative Commons Attribution-Share-Alike 4.0 International License](#) that allows others to share the work with an acknowledgment of the work's authorship and initial publication in this journal.

Introduction

Migration is a dynamic socio-economic process that is closely tied to economic growth. In Indian context, the rise in economic growth is likely to contribute significantly to increased migration. While migration has been credited with the role of reducing interregional and inter-sectorial gaps in living standards, the crucial question is whether, and to what extent, migration has been able to play its role in India (Srivastava, 2012). Historically, internal migration in India has been low (Davis, 1951), and a declining trend in mobility is noticed till about the 1990s (Kundu and Gupta, 1996). This was primarily due to structural and cultural factors that restricted the free movement of individuals. The caste system, deeply entrenched in Indian society, created rigid social hierarchies that discouraged people from venturing beyond their native places. Social mores further reinforced immobility, as communities prioritized maintaining their traditional lifestyles and norms. The joint family system also played a significant role, with its emphasis on collective living and shared responsibilities often discouraging individuals from seeking opportunities elsewhere. In addition to socio-cultural factors, economic conditions such as limited access to education and slow agrarian transformation hindered mobility. Lower levels of educational attainment restricted awareness of opportunities and employability in urban or industrial sectors. Meanwhile, the lack of significant transformation in the agrarian economy meant that rural livelihoods remained largely subsistence-based, offering little incentive for rural populations to migrate in search of better prospects (Davis, 1951; Munshi and Rosenzweig, 2009). Even in the post reform period migration has not increased drastically. Despite economic reforms and globalization, leading to economic growth, industrial expansion and urbanisation internal migration trends have not experienced a dramatic surge. The expected large-scale rural to urban migration in India has not materialized significantly. Many rural populations prefer to stay in their native regions due to cultural, social and economic ties.

However, data from the National Sample Survey and the Census of India suggest that the trend began reversing in the late Twentieth century and continued into the Twenty-first century (Srivastava and Sasikumar, 2003). This was despite the gradual urbanization and industrialization of the country, as structural barriers outweighed the pull factors of urban opportunities. This increase in mobility can be attributed to various factors, including economic reforms, improved infrastructure, and changing aspirations. Even after economic liberalization in 1991, migration did not increase drastically, indicating the persistence of deep-rooted socio-economic barriers. However, in recent decades, India's rapid economic growth, advancements in transportation and communication infrastructure, and rising educational standards have collectively fostered greater mobility. As aspirations rise, particularly among the younger and more educated population, individuals are increasingly willing to relocate in pursuit of better educational, professional, and lifestyle opportunities (Bhagat, 2010). Improved infrastructure, such as the expansion of road and rail networks, has made it easier for people to travel long distances at lower costs. The proliferation of communication technologies, such as mobile phones and the internet, has also played a crucial role in disseminating information about opportunities in other regions, thereby reducing the risks and uncertainties associated with migration. Despite the recent rise in migration levels, challenges remain in structural inequalities, regional disparities, and cultural barriers which still constrain the potential of migration to act as a tool for reducing interregional and inter-sectorial gaps in living standards. Thus, a study is conducted to explore the nature and extent of in-migration in Bhawanipatna, a 175-year-old medium-sized town in Odisha.

Urbanisation is a process of becoming urban from a rural nature based primary economic activities. No longer a phenomenon peculiar only to certain parts of the world rather it is a worldwide

phenomenon. When an increasing proportion of human society becomes towns-folk, and as this happens towns grow in population, spread in area, and make an ever increasing impact on the countryside, both upon its appearance and upon the life of its inhabitants (Smailes, 1975). Lampard (1965) opines there are three concepts of urbanisation which have currently been used in the social sciences: the behavioural, the structural and the demographic. The behavioural concept is concerned with the experience of individuals over time and with patterns of behaviour. The structural concept is employed to the activities of the whole population and is primarily concerned with the change in its economic structure. The demographic concept is primarily related to population concentration. However, it may be considered that the concept of urbanisation is articulated in social, economic and demographic ways. It is quite evident that not a single but a combined set of socio-economic and demographic factors should be used in measuring the process of urbanisation. Thus urbanisation is being the process of becoming urban, moving to cities changing from agricultural to other pursuits common to cities and corresponding changing behaviour pattern (Mitchel, 1969). Common indicators to be used in measuring the level of urbanisation in a region includes increase in the number of towns, positive increase in the proportion of urban to total population, proportional increase of population of different urban classes and urban density. Urbanisation is the function of social and economic changes that take place through time. Development of technology and means of transportation is also a significant factor in promoting urbanisation of any area. Among the major factors that promote the process of urbanisation are migration of population, industrialization, stage of economic development, means of transportation and government policies. Urbanisation is also an important aspect of the process of economic and social change in any region. It is considered as an index of improved social status and way of life. Process of social change in any region may be initiated by variety of factors among these industrializations and urbanisation dominates.

Choice of the Study area

Kalahandi district is proud for its historical places, age old culturally rich folk dances and traditional festivals. Along with its reflective history, drought and flood as slow-onset disasters that impact large areas of Kalahandi over extended period of time. The history of drought can be traced to the days of princely rule, when the first severe food scarcity reported in 1856, which is also known as '*Chhapan Salar Durbhikshya*' of the severest of all droughts. The first official reporting on food scarcity and drought starts in 1868. The district has experienced another devastating drought in 1897 followed by 1899, 1919-20, 1922-23, 1925-26, 1929-30, 1954-55, 1966-67, 1974-75 and 1985. After the severe drought of 1956 and 1966, the rich cultivators of this area came down to the status of middle class cultivators and middle class cultivators into ordinary ones. They all turned into *Sukhbasis*, a term used in Kalahandi for landless cultivators and labourers. It is an accepted fact that even in a good monsoon year with abundant harvest Kalahandi hits the headlines for its infamous poverty and malnutrition caused by drought. In the 1980s the name of this district was associated with backwardness and starvation death which was known as '*Kalahandi syndrome*'. Despite its backwardness it is one of the rich regions of Odisha in terms of history, agriculture, forest resources, gemstones and bauxite reserves, folk dance, folk music, folklore, arts and crafts. Periods of severe drought compelled rural residents of Kalahandi to migrate to the towns like Bhawanipatna. Among five towns of Kalahandi district, namely, Bhawanipatna, Junagarh, Kesinga, M. Rampur and Jaypatna-Mukhiguda; Bhawanipatna is the largest town and it also has long history of serving as headquarter of the district.

The modern history of Bhawanipatna began in 1850, marking its role as the capital of the erstwhile Kalahandi. As the administrative center, its history is closely linked to that of ex-state of

Kalahandi, a part of the present Kalahandi district. The relocation of the administrative headquarters of the former Kalahandi state from Junagarh to Bhawanipatna in 1850 significantly impacted the town's population. At that time, this town had a mere 800 residents (Census of India). However, with the influx of official and service workers, the population began to grow with a slow pace of urbanization. The integration of the former Kalahandi into Orissa on January 1, 1948, further spurred in-migration from districts such as Balangir and Cuttack. Employment opportunity is acting as pulling factor and consequently the people of the hinterlands, neighboring districts like Ganjam and also states such as Andhra Pradesh, Madhya Pradesh, and Chhattisgarh moved towards the town for trade and commercial purposes (Orissa Town Survey Report on Bhawanipatna, Census of India). Bhawanipatna is one among the 14 towns of Odisha state which were in existence before 1901 census. Till 1941 Bhawanipatna was the only town in Kalahandi district comprising erstwhile four revenue villages. It got the status of a municipality on dated 16-4-1951. According to the 1981 census the area of Bhawanipatna municipality comprises six former revenue villages namely Bhawanipatna Nazul, Bhawanipatna, Arkhabahali, Purunapada, Sitabordi and Naktiguda. The last two villages are included in the town on dated 21-1-1975. At the time of 1981 census this town was divided into 15 municipal wards and now as of 2025 there are 20 municipal wards. Bhawanipatna a medium-sized town accommodated a population of 37,821 as per the 1981 census has been divided into small localities called 'Padas', or 'Mahallas'. Although in-migrant households are scattered throughout the town, specific areas such as Marwaripada, Sindhipada, Telugubanktipada, and Purunapada have become notable for their concentration of in-migrant populations (Orissa Town Survey Report on Bhawanipatna, Census of India).

Bhawanipatna, the headquarters of kalahandi district, serves as the cultural and artistic hub of the region. Surrounded by rolling hills and adorned with captivating scenery, the town offers a serene and tranquil environment, ideal for human habitation. Its peaceful atmosphere and rich heritage make it a central nerve of art and culture of Kalahandi district. Beyond its outward appearance as a town of colourful mansions, Bhawanipatna is more than just lifeless collection of buildings. It functions like the central nerve of a living organism, actively shaping and regulating the daily lives of its residents. As the administrative headquarters and one among the five towns of the district, Bhawanipatna plays a key role in governance and state affairs. During the freedom movement it also faced numerous challenges, bearing witnessed to a significant chapter in India's struggle for independence. Bhawanipatna, a medium-sized town with a population of around 70,000 (census of India, 2011) spread over 15.40 square kilometers, does not yet offer all the amenities to its residents need. However, it is well-connected to key places within Odisha by road, with major routes extending in six directions: north, south, east, west, north-east and north-west. Roads leading to Nuapada, Balangir, Junagarh, Bhubaneswar, Raipur, and Thuamul Rampur hold particular significance from both commercial and traffic perspectives. Despite its notable growth, a significant portion of Bhawanipatna's working population still relies on agriculture for their livelihood. The town's development was spurred by its status as the former capital of the kalahandi princely state and its eventual merger with Odisha. This shift not only accelerated its expansion but also brought changes to its social structure, reflecting the town's evolving needs for economic development. Land in Bhawanipatna has increasingly been utilized, with paddy fields on the outskirts being converted into residential areas. Population pressure has driven up land prices, particularly around the Gandhi Chowk area, where property values are the highest. Though Bhawanipatna has experienced a slow but steady rise in Kalahandi, a historically underdeveloped district, its industrial potential remains largely untapped. As the town undergoes transition, population influx may increase, making it crucial to implement better urban planning to support its continued growth. Although Bhawanipatna exhibits many urban characteristics, it is taking

considerable time and requires industrial innovation to achieve parity with other towns in Odisha. Without such development, its growth remains gradual and uneven. The broad aim of the research work is to study the volume and extent of in-migration in Bhawanipatna. The study focusses on examining the demographic trends and demographic changes in the concerned town which can be relatable to other small and medium-sized town in South Asia.

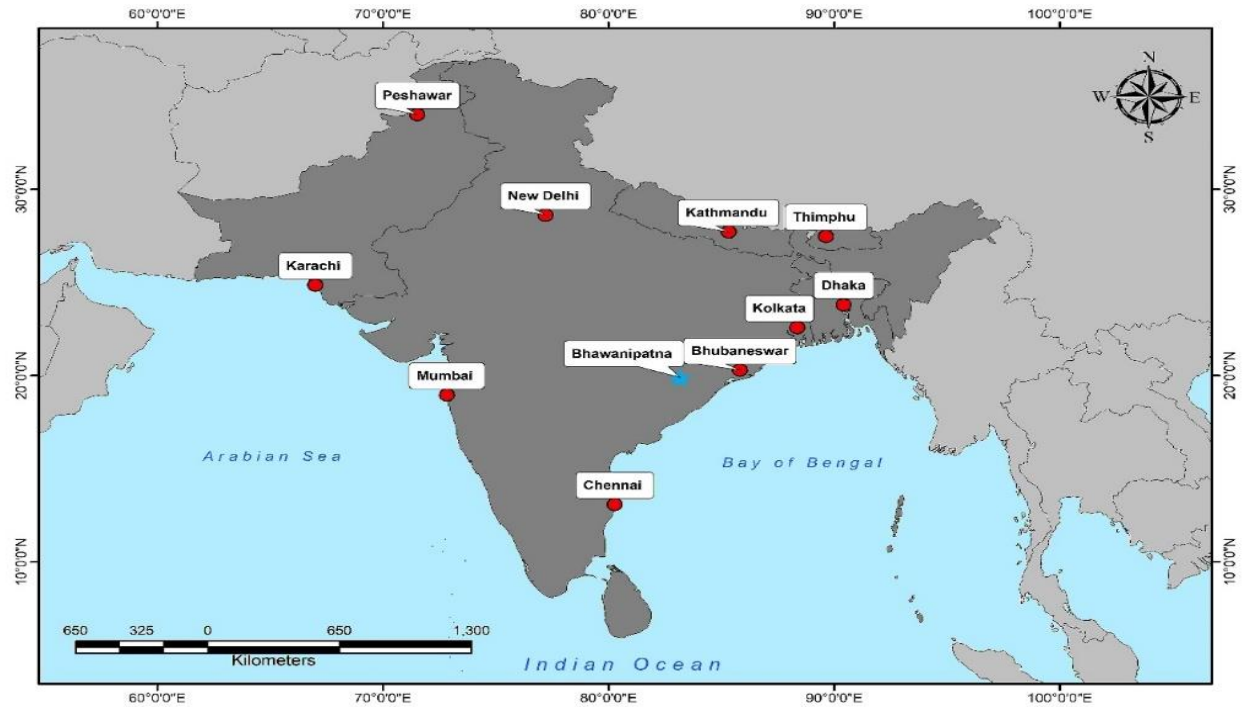


Figure 1: Location map of Bhawanipatna town in South Asia

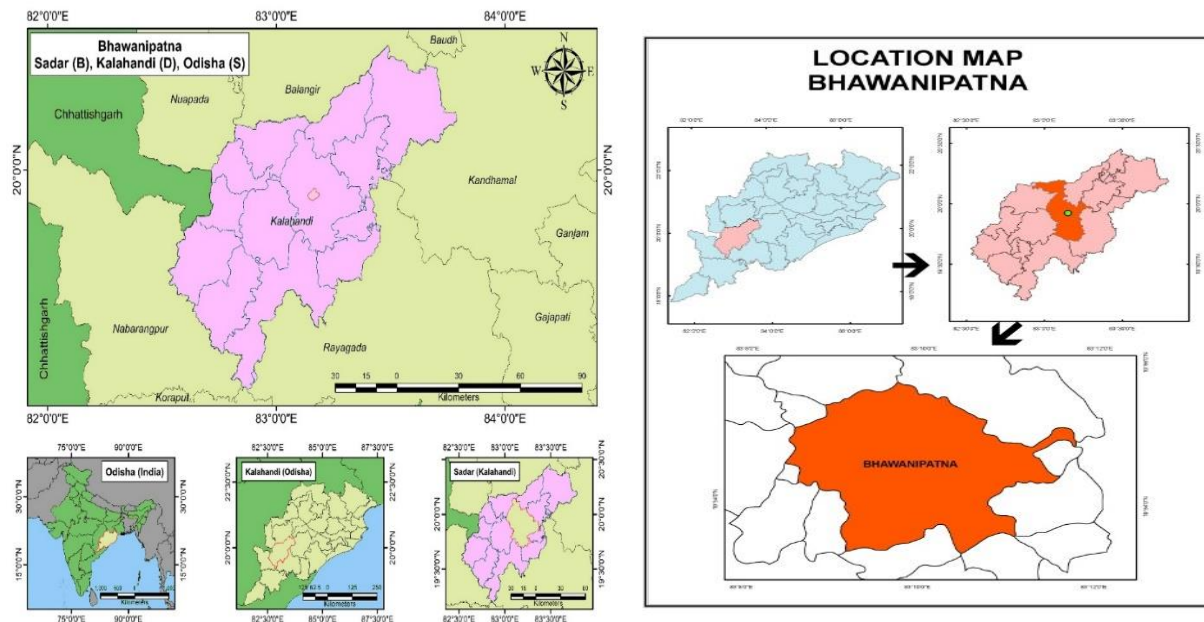


Figure 2: Location map of Bhawanipatna town

The specific objective of the study is to study the volume and magnitude of in-migration in Bhawanipatna. The research questions pertinent to the study are, how the rate of in-migration changed over time with urbanisation in the Bhawanipatna town? Broadly, present study is based on empirical methods within the fold of urban-geographic perspective. The study is based on extracted data from secondary sources such as census and district human development report. The methodology adopted to study the volume and extent of in-migration, this study focuses on several key aspects: demographic trends, and urbanisation. Although migration data from 2021 Census is not yet available, the study attempts to throw light on the historical nature and magnitude of migration in a medium-sized town, Bhawanipatna. An attempt has also been made to predict the population in 2021 and 2031 which implies analysis to estimate future population growth in this town, Bhawanipatna, a growing town in Kalahandi district with unique demographic, economic and social characteristics. The formula adopted for the population projection is $P \times (1+r/100)$. Where P is the initial population, r is the growth rate. There is a need of population prediction for the concerned town as accurate population predictions help in planning for essential services such as housing, water supply, transportation, healthcare and education. Estimating population growth aids policymakers in forecasting labour market demands, resource allocation, and social service needs. Predicting population trends is crucial for addressing environmental concerns for the town, urban sprawl and potential risks related to resource depletion. Census data has been utilized to identify growth patterns.

Results and Discussion

Urbanisation and Migration in South Asia: An overview

Urbanisation in South Asia is accelerating at an unprecedented pace, driven largely by rural-urban migration. While mega cities draw the spotlight, the transformation of small and medium sized towns is equally crucial yet understudied. Internal migration acts as a bridge between rural distress and urban opportunity, especially in India where internal mobility remains underutilized. South Asia, home to nearly a quarter of the global population, is projected to reach 800 million urban residents by 2050 (UN DESA, 2022), with India, Pakistan and Bangladesh leading this growth. Migration plays a dual role- as both a driver and outcome of urbanisation. Yet, urban growth is uneven. While megacities are strained, smaller towns lack infrastructure and planning capacity. Despite many challenges, migration offers a path to economic renewal and demographic vitality. To harness its potential, South Asia needs coordinated investment, inclusive planning, and responsive urban governance. There is a sort of destabilization process in the compulsions of movement from unsustainable rural ecosystems to unsustainable urban ecosystems (Moddie, 1988). Even budgetary allocations of the developing countries in the South Asian region also shows an urban bias, and unhealthy rural prejudice. Distortions caused by unequal rural development are matched by distortions in urban development which have given rise to unintended cities and towns with uncertain future. Human migrations and the consequences of migration should be listed as one of the top priority problems for research and action (Bogue, 1959). It indeed holds a major place in geographic analysis of population. Migration is viewed as a process of population upliftment and a necessary corollary of economic development (Valenty, 1980). Significantly, the internal migrations are generally dominated by rural-urban migration. The main problem associated with such migrations is that people mostly moved from unemployment to underemployment, from green fields to dirty pavements and from poverty in one region to another, resulting in a colossal waste of human resources and perpetual human misery (Mukherji, 1979). This study seeks to examine migration-driven urbanisation and the evolving urban landscape with

particular reference to small and medium-sized town in South Asia. It is with reference to other small towns in South Asian countries.

Bhawanipatna and the South Asian Urban-Migration nexus

Internal migration, or the movement of people within a country, facilitates a more efficient allocation of human resources to sectors and regions where they are better utilized. In India, there are generally no restrictions on internal movement except Arunachal Pradesh, Nagaland, Mizoram, Manipur and Lakshadweep that require an Inner Line Permit (ILP). Internal migration influences the size, composition and distribution of population and also the social, economic and political life of the people. Indian constitution under Article 19 provides basic freedom to move to any part of the country, right to reside and earn livelihood of their choice. The urban population of India, which was 62 million in 1951, increased to 377 million in 2011, spread over around 8000 cities and towns. While the urban population increased by six times during this period, the level of urbanisation hardly doubled from 17 percent in 1951 to 31 percent in 2011. The number of settlements officially designated as urban has also grown quite significantly over the past century, from 1,827 in 1901 to 2,843 in 1951, and further to 5,161 in 2001 and 7,935 in 2011. According to the last census in 2011, the number of internal migrants reached 450 million, reflecting a 45 percent increase from 309 million in 2001. This surge far outpaces the national population growth rate of 18 percent during the same period, with internal migrants constituting 37 percent of the population in 2011, up from 30 percent in 2001. The urban population grew at the rate of 2.76 percent per annum during 2001-11. If compared with the urban population growth rates of the advanced countries, about 3 percent urban growth that India has experienced during the decade 2001-11 could be considered as rapid urbanisation. However, the domestic migration in India is slowing and the overall number of migrants in the country has reduced by 11.78 percent as compared to the census 2011 (Economic Advisory Council to the Prime Minister, GOI). According to the calculations by the council, the total number of migrants in the country, as of 2023, is estimated to be 40.20 crore. While the total number of migrants in census 2011 were 45.57 crore. The migration rate which stood at 37.64 as per census 2011 is estimated to have since reduced to 28.88 percent of the population. The latest PM advisory body report hypothesizes that migration in India is slowing, reduced by 11.78 percent in 2023 as compared to the census 2011 because of improved economic opportunities in smaller cities and in rural areas, better infrastructure development in smaller towns and increased job availability in traditionally migrant-sending regions (Economic Advisory Council to the Prime Minister, GOI). The composition of the top five recipient states attracting migrants are West Bengal, Rajasthan, Uttar Pradesh, Maharashtra and Madhya Pradesh. Mumbai, Bengaluru urban, Howrah, Central Delhi, Hyderabad are the districts attracting most migrant arrivals, while Valsad, Chittoor, Paschim Bardhaman, Agra, Guntur, Villipuram and Saharsa are the top origin districts.

The table illustrates the decennial variation of the urban population in Bhawanipatna from 1901 to projected figures for 2031. Population growth over time during early twentieth century started at 4,400 in 1901 and by 1911, it grew to 5,945 (35.11 percent increase), indicating early urban growth. Growth slowed in the 1920s (only 7.25 percent from 1911 to 1921) but picked up again, reaching 10,863 by 1941 with a substantial 51.42 percent increase. Post-World War II, there is consistent increase in population. The decade from 1961 to 1971 experienced the highest growth, with a dramatic 62.69 percent increase, reflecting significant urbanization and possibly economic changes. During late twentieth century the growth rate began to stabilize but remained positive. The population reached 51,062 in 1991, with a decadal increase of 35.01 percent. From 2001, the growth rate slowed further to 19.05 percent by 2011, indicating a trend of declining growth.

However, during early 21st Century (2021-2031) the projected figures suggest a resurgence, with the population expected to rise to 78,421 by 2021 and 90,887 by 2031.

Table 1: *Decennial variation of urban population in Bhawanipatna town (1901-2031)*

Year	Population	Decadal variation	Percentage decadal variation
1901	4,400	--	--
1911	5,945	1,545	35.11
1921	6,376	431	7.25
1931	7,174	798	12.52
1941	10,863	3,689	51.42
1951	11,807	944	8.69
1961	14,300	2,493	21.11
1971	23,264	8,964	62.69
1981	37,821	14,557	62.57
1991	51,062	13,241	35.01
2001	60,787	9,725	19.05
2011	69,045	8,258	13.58
2021*	78,421	9,376	11.95
2031*	90,887	12,466	15.89

Source: *Census of India, *Projected population*

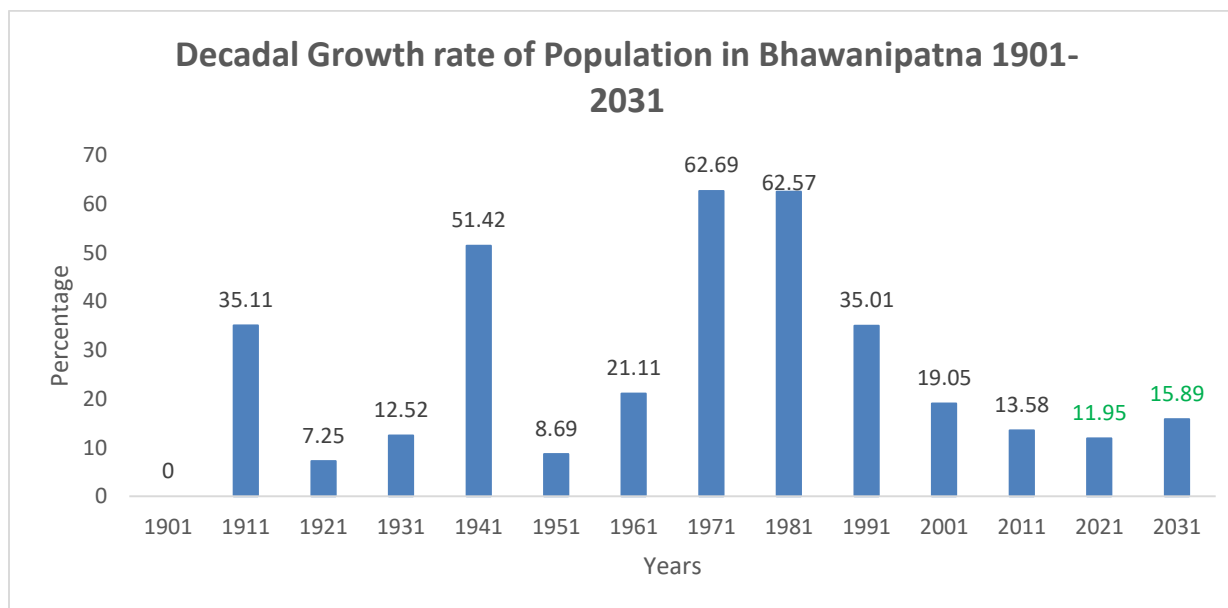


Figure 3: *Decadal growth rate of population in Bhawanipatna, 1901-2031*

The projected increases of 11.95 percent and 15.89 percent indicate renewed urban expansion. Overall trends show fluctuations in growth rates, with peaks during certain decades (1941, 1971, 1981) followed by periods of slower growth. The population of Bhawanipatna has grown significantly over the last century, with distinct phases of rapid growth and periods of stabilization. The recent projections suggest resilience and potential for urban growth, possibly influenced by economic opportunities, migration, or development initiatives. Bhawanipatna, the administrative headquarters of Kalahandi district in Odisha, has been experiencing significant population growth. When we consider the population of peripheral villages in addition to the town's own population, the overall figure is projected to surpass the 100,000 mark in the near future. As this population crosses the 1 lakh threshold, it will have significant implications for local governance, resource management, and urban planning. Authorities will need to focus on sustainable development to ensure that the growing population has access to necessary services and infrastructure while preserving the town's environment. The projections for the next decade indicate continued urbanization, which may impact infrastructure, services, and the overall development of the town.

Conclusion

Based on trends leading up to 2021, the population reflected moderate growth, influenced by urban expansion and increased accessibility. By 2031, the population approaching 1 lakh, assuming consistent economic development and migration patterns. Population predictions for Bhawanipatna in 2021 and 2031 serve as a foundation for informed decision-making and development strategies. By analysing demographic trends and influencing factors, these predictions help ensure sustainable growth and improved living standards for its citizens. The urban growth in the town from 1954 to 2022 indicates the expansion of the town which leads to diversion of water-bodies in general and *Asha Sagar* in particular towards other purpose. This diversion is the action of both by private and public authorities (Meher & Sethi, 2023). To thoroughly analyse the volume and extent of in-migration to a medium-sized town like Bhawanipatna, this study observed urbanization levels. While urbanization can provide a general indicator of population growth and settlement patterns, it does not offer specific insights into the quantum of in-migrants or the factors driving such migration. Therefore, this study invites research

work following more comprehensive approach involving demographic profiling, spatial distribution and the need for urban planning to accommodate the influx sustainably. Recommendations in this regard may include housing schemes, skill development programs, and improved public services to integrate migrants into the socio-economic fabric. Conducting the study in these directions ensures a nuanced understanding of the dynamics of in-migration, its volume and its extent in shaping town like Bhawanipatna. However, challenges like resource limitations and migration outflows could affect this growth. Rising populations could strain existing resources, infrastructure and public services leading to sustainability issues. The local administration should prioritize sustainable urban planning to accommodate future populations while minimizing negative impacts like overcrowding and pollution. Population growth could alter the town's social and cultural dynamics, introducing challenges such as increased demand for education, housing, healthcare and the supply of drinking water. The rate of water consumption is directly proportional to population growth and the growth of urbanisation (Zubaidi et al., 2020; Raj, 2016; Saraswat et. al, 2016, 2017).

To conclude, the volume, magnitude and growth of Bhawanipatna town's population is shaped by various factors and among them urbanisation and migration plays a crucial role. The role of urbanisation in transforming the town's landscape, driving infrastructure development and economic opportunities. World over promoting sustainable urban development is crucial, especially in South Asia, due to the increasing global trend of rural-to-urban migration. A significant movement of people from rural areas to urban centres is expected to continue in the coming decades. However, a growing challenge lies in mobilizing adequate resources to effectively address the issues linked to slum expansion, which hampers efficient urbanisation and hinders progress toward achieving the desired outcomes of the Global Sustainable Development Goals (United Nations, 2019; Karmakar et al., 2024). However, rapid urban expansion also brings many challenges in terms of availing services to the people living in the town. Migration i.e. rural to urban, interregional and interstate has contributed significantly to population growth in the town influencing labour markets. A balanced approach to urban planning, resource management and holistic development is essential to ensure the town's long-term growth while maintaining a high quality of life for its residents. Bhawanipatna's trajectory of urbanisation, population growth and migration reflects the broader South Asian scenario, where small and medium-sized towns are emerging as critical sites of demographic shifts, economic mobility and evolving urban futures.

Conflict of Interest

The authors showed no conflict of interest.

Funding

The authors did not mention any funding for this research.

References

- Behuria, B., & Nayak, D.K. (2024). Seasonal Migration, Rural Livelihood Strategy and Sustainability in Kalahandi District, Odisha. *North Eastern Geographer*, Vol 43 (2), pp. 3-18.
- Davis, K. (1951). Population and the further spread of industrial society. *Proceedings of the American Philosophical Society*, 95(1), 8-19.
- Debroy, B., & Mishra, D. P. (2024). 400 million dreams: Examining volume and directions of domestic migration in India using novel high frequency data. Economic Advisory Council to the Prime Minister, GOI.
- Karmakar, R., Dey U., Sarkar, S. & Shivaramakrishnan, L. (2024). The Revitalised City: A plan for Kolkata' long-term Urban Sustainability. *North Eastern Geographer*, 43 (2), 62-76.
- Keshri, K., & Bhagat, R. B. (2010). Temporary and seasonal migration in India. *Genus*, 66 (3), 25-45.
- Kundu, A., & Gupta, S. (1996). Migration, urbanisation and regional inequality. *Economic and Political weekly*, 3391-3398.
- Meher. M. K. and Sethi K. M, Sustainable urban water management of a Historical town Bhawanipatna in Kalahandi District, Odisha: Issues, challenges and strategies. (2023). In N. K. Mishra, S. Roy and M. K. Meher (Eds.), *Population Dynamics and Environmental Sustainability* (pp. 192-204). Manak Publications, New Delhi.
- Munshi, K., & Rosenzweig, M. (2009). Why is mobility in India so low? Social insurance, inequality, and growth (working paper no. 14850). National Bureau of Economic Research.
- Odisha District Gazetteers: Kalahandi, Gazetteers unit, Department of Revenue, Government of Orissa, 1980.
- Office of the Registrar General and Census Commissioner of India, Census of India, 2011, GOI
- Orissa Town Survey Report: Bhawanipatna, Part X, Series-16, Census of India, 1981.
- Raj, K. (2016). Urbanization and water supply: An analysis of unreliable water supply in Bangalore city, India. *Nature, economy and society: Understanding the linkages*, 113-132.
- Saraswat, C., Kumar, P., & Mishra, B. K. (2016). Assessment of storm water runoff management practices and governance under climate change and urbanization: An analysis of Bangkok, Hanoi and Tokyo. *Environmental Science & Policy*, 64, 101-117.
- Saraswat, C., Mishra, B. K., & Kumar, P. (2017). Integrated urban water management scenario modeling for sustainable water governance in Kathmandu Valley, Nepal. *Sustainability Science*, 12, 1037-1053.
- Srivastava, R. (2012). Internal migrants and social protection in India. *Human Development in India*, 2, 166-212.
- Srivastava, R., & Sasikumar, S. K. (2003, June). An overview of migration in India, its impacts and key issues. In *Regional conference on migration, development and pro-poor policy choices in Asia* (Vol. 22, p. 24).
- Zubaidi, S. L., Ortega-Martorell, S., Al-Bugharbee, H., Olier, I., Hashim, K. S., Gharghan, S. K., & Al-Khaddar, R. (2020). Urban Water Demand Prediction for a City That Suffers from Climate Change and Population Growth: Gauteng Province Case Study. *Water* (20734441), 12(7).