

DEMOGRAPHIC TRANSITION IN BELGAUM CITY, KARNATAKA, INDIA

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Abstract

Belgaum city in recent past has experienced a rapid urbanization. This study mapped urban land expansion in Belgaum using Pan+LISS III, Toposheets and Cadasterial maps data of 2010, 2008, 1980 and 1970 and analyzed the growth of population during the respective years. The results show that Belgaums urban land increased by 94.08 Sq Kms, of which 80.8% occurred during 1970-2001, a perfect positive correlation between the population growth and physical expansion can be seen. The studies showed that urban expansion had been largely driven by demographic change, economic growth, and changes in land use policies and regulations.

Key Words: Urbanization, Population Growth, Spatial expansion, Change analysis

Introduction

The typical transformation of an economy from agricultural and mainly rural to industrial and predominantly urban in the process of development has long been a well established fact (Dimiyati, 1995). Urbanization, simply defined, is the shift from a rural to an urban society, and involves an increase in the number of people in urban areas during a particular year. Urbanization is the outcome of social, economic and political developments that lead to urban concentration and growth of large cities, changes in land use and transformation from rural to metropolitan pattern of organization and governance.

Study Area

Belgaum city is located at 15.87° N latitude and 74.5° E longitude (Fig.No.1) the northwestern part of the state of Karnataka, in the southern region of India. It is 710 meters above the mean sea level. It lies near the borders of the Indian states of Maharashtra and Goa. It is 502 km from Bangalore, 500 Km Southeast of Mumbai and 125 Km southeast of Goa. Physiographical the city is the foothills of Sayadhri range (Western Ghats). The climatic conditions are pleasant and characterized by a general dryness except during the rainy season. The average annual rainfall varies from 776 to 1040mm. The relative humidity is about 85 percent and it is generally higher in monsoon season.

Objectives

To Study the spatial growth of City. To study the Changes in Population with spatial growth.

Sources of Data

Primary and secondary data is collected to carry out the research work. Primary data is collected through questioners and personal observation. Secondary data is collected through Belgaum district Censes Book, Town Directory Gazettes, and Journals, Belgaum Development Authority, Municipal Corporation of Belgaum etc. Topographical sheets(1970) published by Survey of India, Cadastral Map(1980) form Belgaum Urban Development Authority and Pan+LISS III Satellite Images(2004 & 2008) form Karnataka State Remote Sensing Centre has been collected.

Methodology

The present study has been carried out broadly in five stages –Literature and discussion, data collection of the study area by field survey, data processing, preparation of maps and presentation. ArcGIS 9.2 and ERDAS imagine 9.0 softwares have been used as tools to map the growth of the study unit. The Pan+Liss III satellite imagery, Toposheet and Cadastral maps are used to analyze the spatial change. It is feasible to integrate spectral information from remote sensing and established data from GIS to set as the reference material for mapping. Through integrated database and parameters, the related uncertainty levels data has been classified.

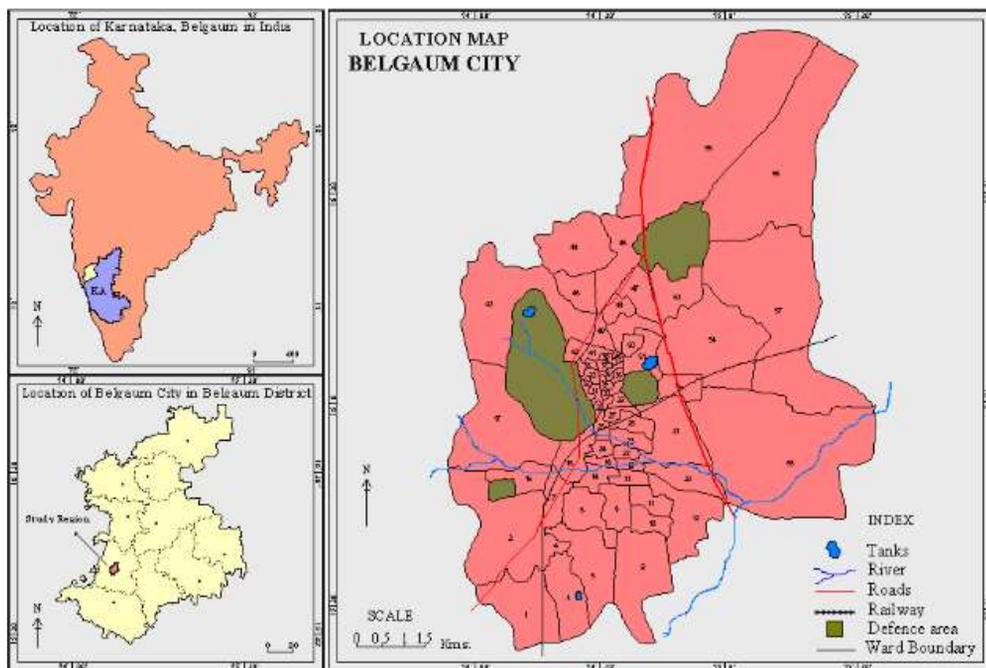


Figure 1. Location map of study area

Evolution and Growth of the City

The origin of a city is “diverse and complex” in which both functional as well as environmental factors work conjointly in the origin of any pre-urban nucleus at a particular place (Arun Sexena 1989) The urban centers generally came into existence from rural landscape and therefore, it has rightly been called by many scholars that the towns are out come of the villages. Nearly a century ago Belgaum city was small village. The inceptions found in the city, denotes that the region has developed since the 12th century. The morphological expansion of the city is classified into five phases Table: 1.

The city developed in 12th Century itself, the rate of growth till the 1st phase is very slow. The development of city from 1820 to 1850 was rather slow, but from 1872 onwards development became normal. Further extension took place in the year 1912 when the Tilakwadi area was

included. From 1901 to 1920, the city had not noticed any remarkable growth with respect to industries, residential and other functional zones. At this time, commercial activities fairly played their role in the occupational structure along with agricultural activities of the people. during subsequent decades the commercial activities were intensified. The area of town was increased from 2.15 sq.kms to 6.8 sq.kms. in 1920. The development of phase 4th started after 1955. From 1960 onwards the city is constantly expanding both in terms of population and area, to provide better urban amenities and facilities to the people of Belgaum city. Thus By the completion of year 1970 the area of the city increased to four times i.e. 28.62 sq km in the year 1966. By the year 1971, the population of city also increased from 1,46,790 persons in 1961 to an extend of 2,13,872 persons in the year 1971. By the year 1981, the population of Belgaum was increased to 3,00372 (including cantonment) persons. In 2001, the total area if the city was 94.08 sq kms. The decadal growth rate was above 12.09 percent as compared to 1991. The area of the city slightly increased between these two periods mainly due to city development within its periphery limits.

Table 1: Phase Wise Growth of Belgaum City

Stages	Period	Actual Area In Sq Kms	Population in Lakhs
I	Before 1885 (Very Slow)	1.7	0.54
II	1885 – 1915 (Slow)	3.26	0.70
III	1915 – 1955 (Normal)	14.32	1.31
IV	1955 – 1970 (Rapid)	28.62	2.14
V	1970 – 2001 (and after) (Very Rapid)	94.08	4.25

Source: Municipal Corporation and Personal Computation

Phase Wise Growth of City

Phase 1st –Development Before 1885 (Very slow):

The origin of a city is “diverse and complex” in which both functional as well as environmental factors work conjointly in the origin of any pre-urban nucleus at a particular place (Wodeln 1987). In fixing the pre-urban nucleus, ‘conditions of the site’ play an important part, while in the subsequent stage of growth ‘situation’ is more important. The site is a controlling factor, the importance of which towns share with villages but situation is particularly an urban attribute. The urban centres generally came into existence from rural landscape and therefore, it has rightly been called by many scholars that the towns are out come of the villages. Nearly a century ago Belgaum city was a small village. The inceptions found in the city, denotes that the region has developed since the 12th century. The historical study of Belgaum reveals that the origin of the city goes back to some remote time. But actual morphological development has been taken from 1885 with a population of about 0.54 lakhs (Fig.2). The urban planning innovations and diffusions of these aspects have played an important role in the morphological development of city. These innovations in the urban development of the city can be identified in the recent extension areas. The

morphological expansion of the city can be classified into five phases. The Development and expansion of Belgaum city can be conveniently divided into five Phases for the study purposes, they are as follows.

The inscriptions which were found in and around the Belgaum city denote that the city was developed from 12th Century itself. But Belgaum does not appear to have been a large town either under the Muslims rule or under the Marathas. The development of Belgaum was slow upto 1915.

Phase 2nd –Development Between 1885-1915 (slow):

The Belgaum proper, according to Mao of Belgaum Gazetteer (British Govt) covers an area of nearly 3.26 Sq. kms located in between Cantonment in the west and fort. Interesting to note that the earliest record of 1820, Belgaum had 7652 people lodged in 1309 houses, of which belonging to 1/3 were Marathas, 1/3 Muslims, 1/3 Ligayats, 1/8 Janis and 1/9th Brahmins. The choice of Belgaum as the head quarters of the collectorate and as the chief military station in Karnataka (Old Mysore State) brought a large accession to the population mainly Marwadi traders, Madras Mahars and Pondichery and upper class of Hindus in government services. By the year 1852 the population of Belgaum was increased to 3000. In 1870 the opening of Amboli pass and the direct Communication with the port of Vengurla in Ratnagiri District (Maharashtra State) brought a further increase to the trade and population of the town. The number of Houses in year 1872 was 4388, which further increased to 7713 in the years 1918. Thus the development of city from 1820 to 1850 was rather slow, but from 1872 onwards development may be identified as normal. Further extension took place in the year 1912 when the Tilakwadi area was included. The Pune-Bangalore railway line was already constructed in 1878 A.D. The linkages of railway to the town accelerated the development of handloom Industries, Jewellery shopping and cotton textile activities. As a result the city started to attract people from its hinterland.

Phase 3–Development Between 1915-1955 (Normal):

From 1901 to 1920, the city had not noticed any remarkable growth with respect to industries, residential and other functional zones. At this time, commercial activities fairly played their role in the occupational structure along with agricultural activities of the people. During subsequent decades the commercial activities were intensified. As a result, good number of godownes, office buildings, and houses were constructed by the merchants for the purpose of trade in the city. Such a nature of functional characters helped to push the city boundary towards the south of railway line. The area of town increased from 2.15 sq.kms to 6.8 sq.kms. in 1920. Meanwhile, ginning, oil mills and handloom charkas etc., were established without any proper planning. As a result it there was sign of development of slums in this area. The existence of efficient and organised markets and industries have stimulated the growth of town by generating other economic functions, such as, transport agencies, servicing centres. The commercial areas were started to locate in the central part of the city. All these functions were relatively related to agricultural products of the surrounding region. The development of phase III started after 1915, when the establishment of new schools, colleges particularly G.A high school (1916), R.P.D College (1948), Benonsmith College of Commerce (1950) etc. As a result of these, there was a rapid development of different activities in the city. The municipality limit was further extended upto Tilakwadi in the year 1912, and Shahapur village was included in the year 1952.

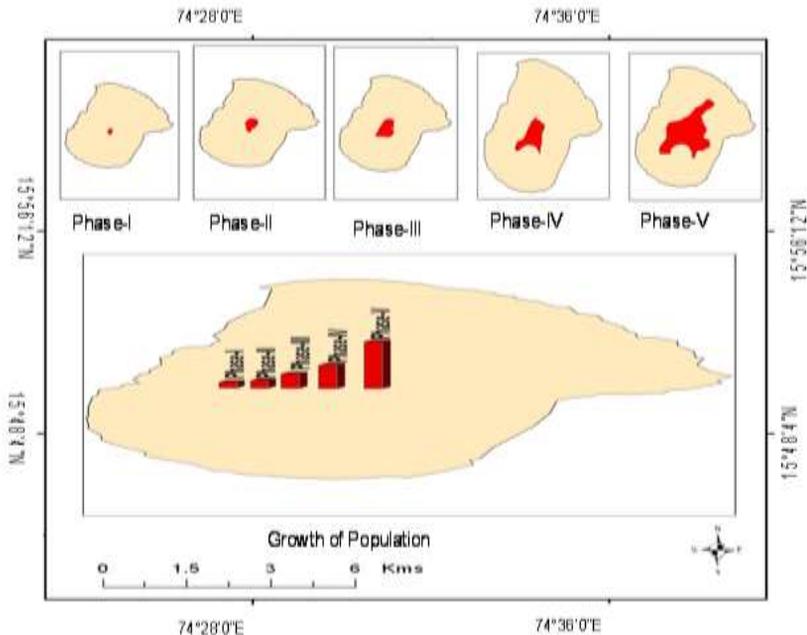


Figure 2. Phase wise growth of Belgaum City

Phase 4th –Development between 1955-1970 (Rapid):

The development of phase 4th started after 1955. From 1960 onwards the city has been constantly expanding both in terms of population and area to provide better urban amenities and facilities to the people of Belgaum. No city acquires its full Urban development unless basic facilities like Potable water supply, Underground drainage system, medical aids through hospitals, Education through Educational Institutions like Arts, Commerce, Science, Engineering, Medical, Fine Arts, facilities etc (Harold M.H. 1965). In this regard the storage of water supply through the Rakasskoppa Reservoir in the year 1962, Underground drainage system in the year 1965, establishment of many more Educational institutions and several other facilities in the city indicate that fast growth took place in around of Belgaum. The suburban areas of Angoal, Majgoan, Mahadevpur Vadgon, Old Belgaum were included in the city in the year 1970. This area also comprises the well planned areas like Hindwadi Tilakwadi, Udyambagh Industrial Estate, Khasbag Area etc. A peculiar development of city upto 1970 was only towards southern side, because of merging of neighbouring villages on which the city life was entirely depended on it. The extension of city limit towards its north took place in the year 1970 in which Mal Maruthi Extension, Market yard, Shivabasavanagar and Jawaharlal Nehru Medical College area were included. Another greatest advantage of Belgaum city to develop to such an extent in the North Karnataka is the position of Belgaum as a divisional Headquarters of Karnataka state and this certainly contributed to the fast growth of city. At the end of 1970 the city area increased to an extent of 28.62 sq.kms.

Phase 5th–Development between 1970-2001(and after)- (Very Rapid):

By the completion of year 1970 the area of the city increased to four times i.e., 28.62 sq km. By the year 1971, the population of city also increased from 1,46,790 persons in 1961 to an

extent of 2,13,872 persons in 1971. By the year 1981, the population of Belgaum was increased to 3,00,372 (including cantonment) persons with 40031 houses and extended towards North, West and Eastern direction. Further extension took place in the year 1991 when the extension areas like Maratha Colony, Bhagya Nagar, Chennamma Nagar (Southwest), Rukmini Nagar, Vishveshwarayya Nagar, K.L.E. Eng College Shahu Nagar etc were included. Thus by the end of 2001 the area of the city increased four times i.e 94.08 Sq.kms as compared to 28.62 Sq.kms in the earlier decade (1970). The net increase was about 65.45 Sq.kms i.e from 1970 – 2001. Further city extended towards Yamanapur, Muttenhatti, Ramatirth, Sideshwar Temple and Kanburgi in the North, Kudachi, Alawad in the west Naragundkar Colony, Guruprasad Colony in the west and Vinayak Nagar, T.V. centre and Hanuman Nagar in the North western part of the city. The population also increased from 2,13,872 to 4,23,432 (including cantonment) in 2001. Table No.2 indicates the decade wise growth of area in Belgaum city along with the growth of population. The Study reveals that the growth of area was not same throughout the study period. In 1961 the total area of Belgaum city was just 14.32 Sq kms and it is increased to 28.62 Sq. kms in year 1971. During the period of 1961 – 1971 the decadal growth rate was about 99.86 percent. The rapid growth of area due to the establishment of new Educational Institutions, industrial facilities and large scale immigration into Belgaum city from the surrounding hinterland. In the year 1981, the total area of the town was 52.82 Sq. kms and its decadal growth rate was 84.55 percent as compared to earlier decade of 1971. During this period major changes took place in the city due to the establishment of new government offices, commercial complexes, industrial estate and the growth of urban amenities and infrastructure facilities in the city. During 1991, the total area of the city was 83.93 Sq. kms and its decadal growth rate was about 58.89 percent as compared to 1981. During this period, the area of the city was mainly developed due to the establishment of Belgaum Development Authority (BUDA) in 1989. It is an apex body to Co-ordinate the development programmes within the local planning Area of Belgaum city. In 2001, the total area of the city was 94.08 sq kms. The decadal growth rate was above 12.09 percent as compared to 1991. The area of the city slightly increased between these two periods mainly due to city development within its peripheral limits.

Conclusion

The city is experiencing physical expansion with the increasing population. There is phenomenal increase in population from 1970 and the graph goes higher. Along with the population growth, spatial growth is also taking place. A perfect positive correlation between the population growth and physical expansion can be seen. Growths being a good part of development, the residues by the growth are very serious. Shadow areas like slums, infrastructure, utilities, transportation, solid waste management, preservation of ecology, increasing demand for housing, jobs and urban amenities all together stands as a big challenge for administrators and planners of Belgaum. The research shows the acceleration of changes is faster every year.

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