

A Comprehensive Study of Educational and Demographic Status of the Rural- Urban Fringe Area of Kolhapur City

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Abstract

Rural-urban fringe is transition zone between rural and urban area, and it shows both characteristics. Any statistical parameter that impacts population growth or decline can be included in demographics; however, certain criteria are essential: size, density, sex ratio, and population of the fringe area. The rural-urban fringe of the city is a significant area because it shows both urban and rural characteristics. The fringe area consists of 20 villages around Kolhapur city. The Socio-economic development of the fringe area is examined in terms of population, population density, and sex ratio of the fringe villages from 1981 to 2011. And the educational development of fringe areas includes the literacy rate and educational institutes in this area. The current research paper examines the demographic and educational development of fringe areas over a 30-year population period. From 1981 to 2011, the population increased steadily over a 30-year period because the fringe area is near Kolhapur city and the fringe area provides basic services like supplying milk and vegetables, etc., and plays an important role in the city. As a result, an effort has been conducted here to evaluate the demographic and educational growth of the periphery area.

Keywords

Rural-Urban fringe, Social, Growth rate, Density, Sex Ratio, Demography.

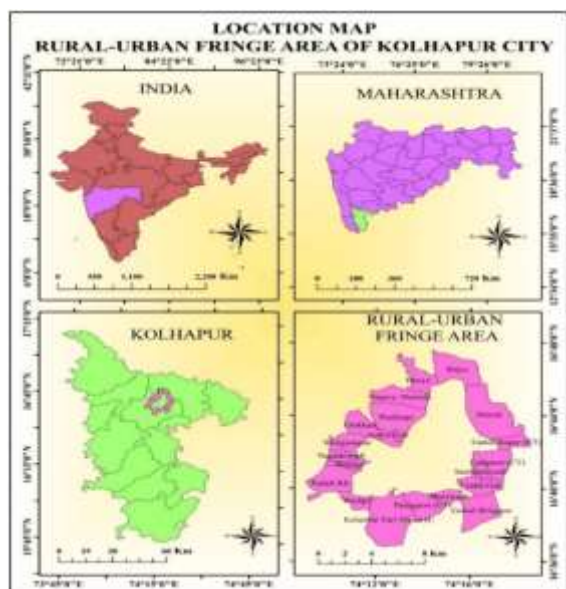
Introduction

The dynamic nature of the fringe can be detected by observing the changes in the city and vice versa. The changes in the rural-urban fringe depend upon the function and size of the city. Over the last 30 years, The Rural-Urban Fringe area of Kolhapur city population increased. In 1981-2011 Period population increased by 83,147 to 2,01,328. In India rural area is engaged in agriculture-based activities but metropolitan cities are engaged in tertiary and large-scale secondary activities. But small cities like Kolhapur are the cities that show both cultures like the rural areas as based on some Agro-based industrial sector and culture of urban areas as developing small-scale industries. In this combination fringe of any city plays an important role. Because it connects the city with the rural areas, and it combines both rural as well as urban activities. It provides agricultural products to the city easily as well as human resources. It provides low-rent accommodation as compared to the city and people can use facilities from the city. Therefore, this area plays important role in the city's development. Therefore, here an attempt has been made to analyse the economic status of this fringe of Kolhapur.

Objective

To study social and educational aspect of the rural-urban fringe area of Kolhapur city.

Study Area



Kolhapur is an inland city located in south-west Maharashtra state. The geographical area of fringe area is about 122.13 Sq.km and the population of fringe area is 2,01,328 as per the census 2011. Kolhapur is headquartered of the district. It is located between 16° 42' North latitude and 74° 14' East longitudes at an altitude of 650 meters above mean sea level. The city of Kolhapur is located on the right bank of the river Panchganga. The fringe area comprises about 20 villages. These are located on the boundary of the city. The following table shows the population of villages located on the fringe area.

Data base

The current study is based on secondary data and data collected in the Kolhapur district census handbook from 1981 to 2011.

Methodology

Various effective statistical methods for gathering, tabulating, classifying, calculating, and interpreting data have been applied in the current study. The research has been supported using quantitative and cartographic methods. The quantitative and cartographic methods, maps

diagrams are used as necessary, with their meaning specified in the current research of rural-urban fringe development.

1. Population Growth Rate

The population growth rate calculated by formula,

$$Gr = (P_2 - P_1) / P_1 * 100$$

Where, Gr represents Population Growth Rate

P₂ represents Final Population Size

P₁ represents Initial Population Size

2. Population Density

Population density calculated number of persons living per sq. km area.

$$\text{Population Density} = \text{Number of People} / \text{Total Land Area}$$

3. Sex Ratio

The sex ratio is defined as the number of females per thousand males.

$$\text{Sex ratio} = \text{No. of Females} / \text{No. of males} * 1000$$

4. Literacy Rate

The literacy is defined as the ability of reading and writing of person (Census of India, 2011).

$$\text{Literacy Rate} = \text{Literate Population Age 7 and above} / \text{Total Population Age 7 and above} * 100$$

Result and Discussion

Demographic Aspect

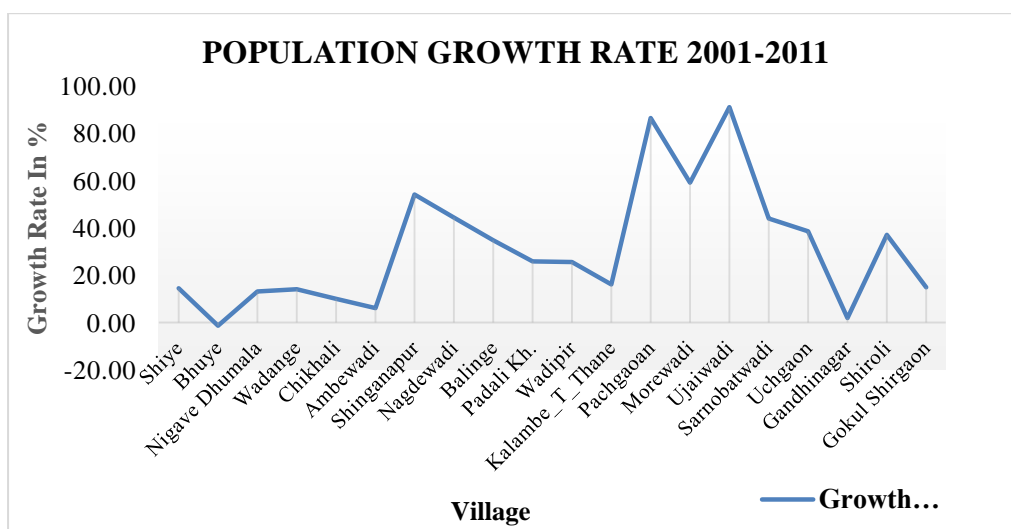
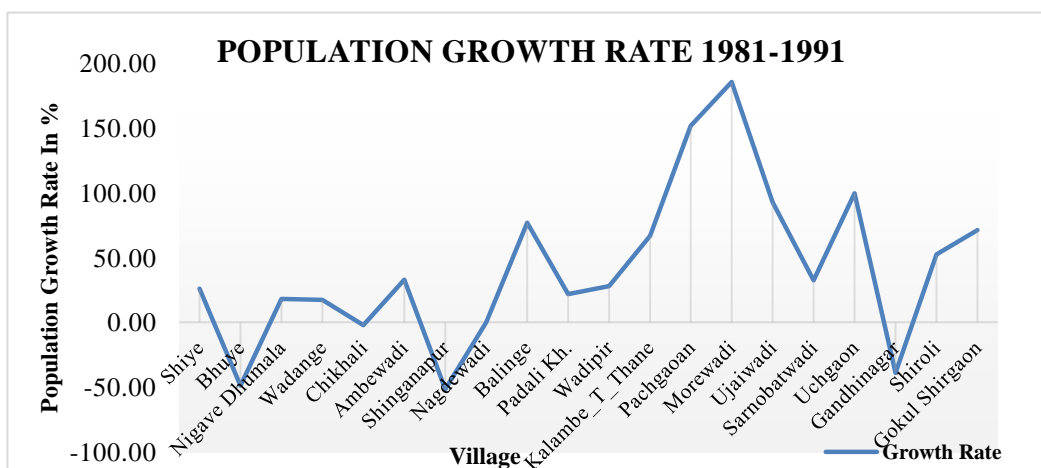
The word demography comes from two old Greek words, demos, meaning "the people," and graph, meaning "writing about or recording something." Van de Walle (1982) Defined "demography as the scientific study of the human population, primarily with respect to their size, structure, and development." The study of demographic development of a rural-urban fringe area of Kolhapur city, to analyse different characteristics of the population, density, and sex ratio of the fringe area over 30 years period. The demographic indicators are discussed below.

Population Growth Rate

Sr. No.	Village	1981	1991	Decadal variation	Growth Rate	2001	2011	Decadal variation	Growth Rate
1	Shiye	4421	5566	1145	25.90	8307	9503	1196	14.40
2	Bhuye	5018	2566	-2452	-48.86	2781	2744	-37	-1.33
3	Nigave Dhumala	4630	5464	834	18.01	6101	6898	797	13.06
4	Wadange	9148	10740	1592	17.40	11846	13507	1661	14.02
5	Chikhali	4606	4501	-105	-2.28	5728	6301	573	10.00
6	Ambewadi	1507	2002	495	32.85	2077	2203	126	6.07
7	Shinganapur	7686	3722	-3964	-51.57	4911	7570	2659	54.14
8	Nagdewadi	0	2010	2010	0.00	3449	4981	1532	44.42
9	Balinge	1709	3023	1314	76.89	3828	5158	1330	34.74
10	Padali Kh.	2929	3569	640	21.85	4297	5408	1111	25.86
11	Wadipir	1214	1553	339	27.92	1893	2376	483	25.52
12	Kalambe_T_Thane	3939	6561	2622	66.57	8734	10138	1404	16.08
13	Pachgaoan	2016	5069	3053	151.44	11991	22353	10362	86.41
14	Morewadi	885	2525	1640	185.31	4539	7222	2683	59.11
15	Ujlaiwadi	1098	2113	1015	92.44	4750	9075	4325	91.05
16	Sarnobatw	1244	1648	404	32.48	2586	3722	1136	43.93

	adi								
17	Uchgaon	7417	14790	7373	99.41	22548	31238	8690	38.54
18	Gandhinagar	10767	6561	-4206	-39.06	12374	12601	227	1.83
19	Shiroli	11069	16854	5785	52.26	21671	29707	8036	37.08
20	Gokul Shirgaon	1844	3154	1310	71.04	7505	8623	1118	14.90

Source: Computed by Researcher based on District Census Handbook Kolhapur (1981-2011)



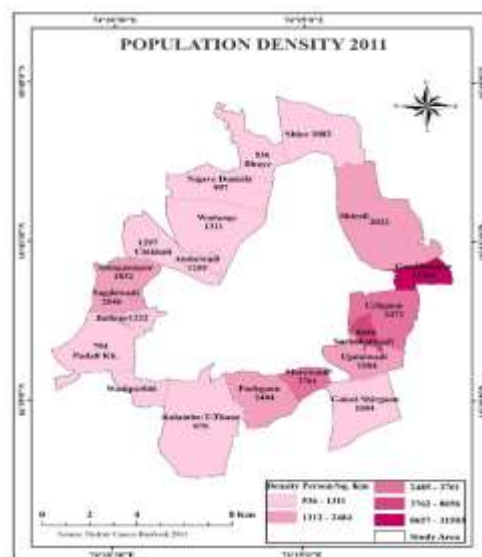
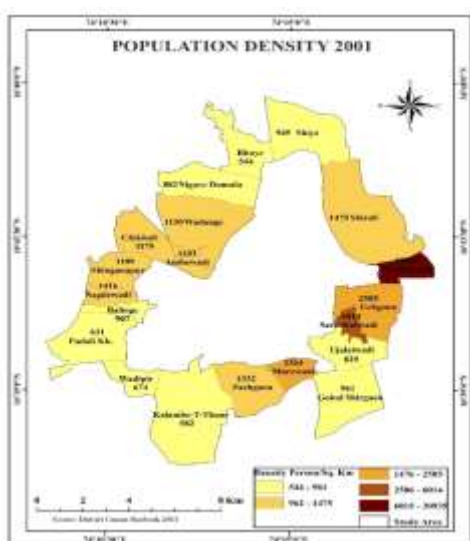
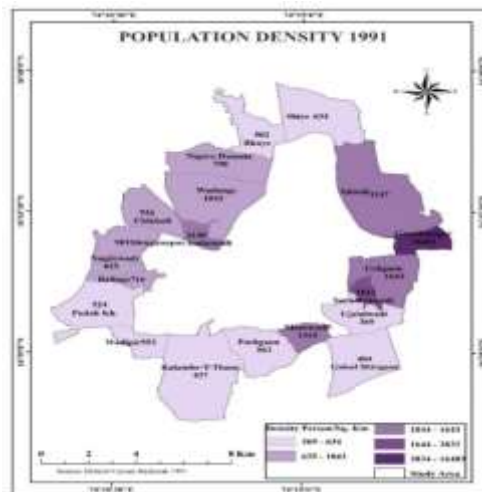
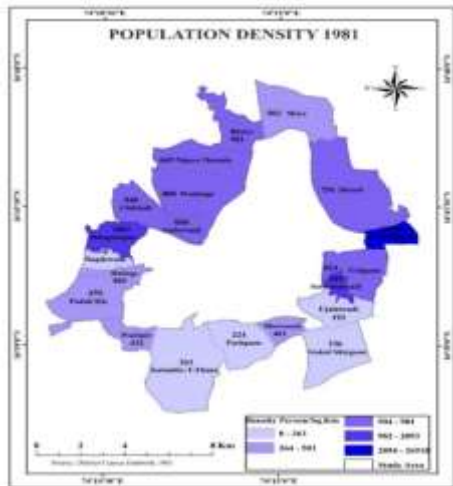
The population growth rate calculated by 1981-1991 and 2001-2011 decadal period. The 1981 to 1991 decadal period population growth of fringe area fluctuated due different reasons. Morewadi and Pachgaon villages the population growth increased in 185.31 and 151.44 because 1981-to-1991-decade population growth is doubled and this villages comes under city area, most of the population migrated and their settled down. This villages constructed big bungalows and cities like construction but rural facility. The Ujlaiwadi, Gokul Shirgaon and Uchgaon village represents highest growth rate because this villages near to city and available of various services and facility like rural areas. Population growth of fringe area fluctuated from the year 2001-to-2011. The Ujlaiwadi and Pachgaon village recorded highest growth rate because developing Airport and rural area convert into urban. The Bhuye village population growth is negative this village 14 km away from the city most of the area under agriculture land and it comes under rural area.

Population Density

The population density is an important characteristic of demographic development. The density of population represents number peoples living per unit area Sq. Km. and it show man and land proportion. Population density calculated by ratio between total population of fringe area to total area formula of population density.

Sr. No.	Village	Population Density Person/Sq. Km.			
		1981	1991	2001	2011
1	Shiye	503	634	945	1082
2	Bhuye	981	502	544	536
3	Nigave Dumala	669	790	882	997
4	Wadange	888	1043	1150	1311
5	Chikhali	948	926	1179	1297
6	Ambewadi	858	1140	1183	1255
7	Shinganapur	1861	901	1189	1832
8	Nagdewadi	0	825	1416	2046
9	Balinge	405	716	907	1222
10	Padali Kh.	430	524	631	794
11	Wadipir	432	553	674	846
12	Kalambe-T-Thane	263	437	582	676
13	Pachgaon	224	563	1332	2484
14	Morewadi	461	1315	2364	3761
15	Ujalaiwadi	192	369	829	1584
16	Sarnobatwadi	2893	3833	6014	8656
17	Uchgaon	824	1643	2505	3471
18	Gandhinagar	26918	16403	30935	31503
19	Shiroli	754	1147	1475	2022
20	Gokul Shirgaon	236	404	961	1104

Source: Computed by Researcher based on District Census Handbook Kolhapur (1981-2011)

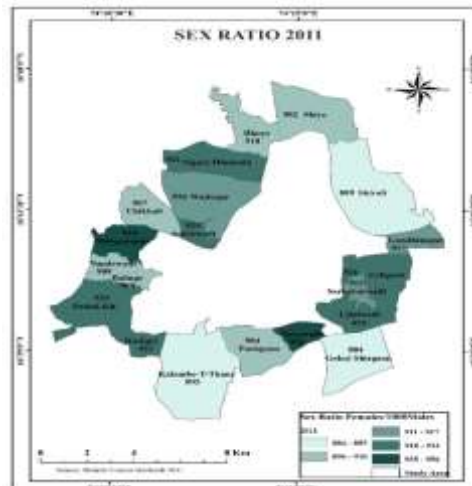
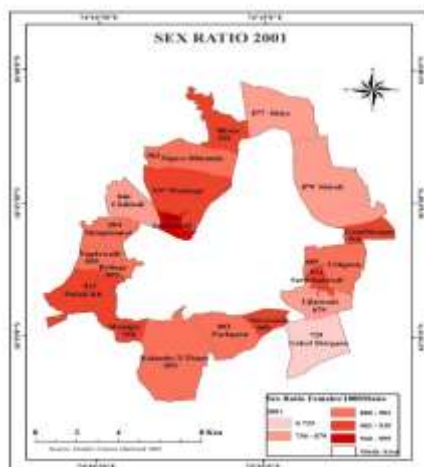
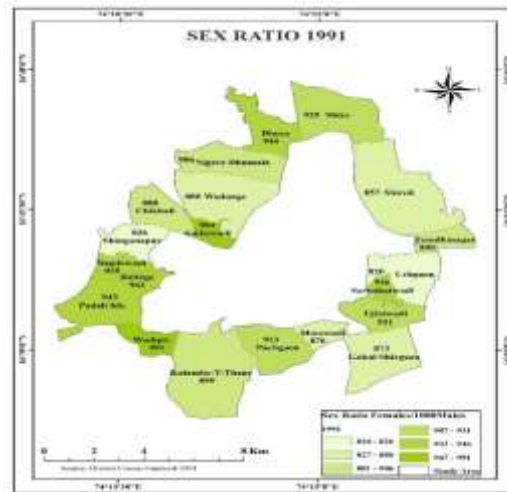
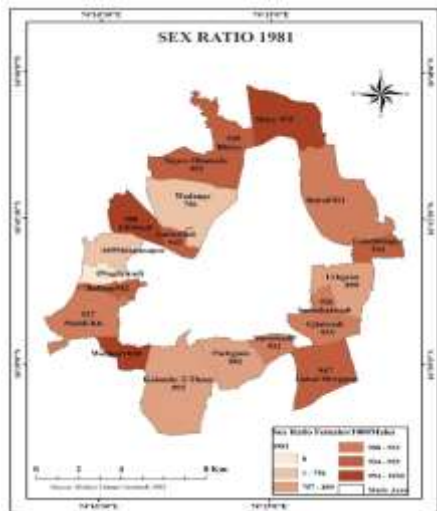


Sex Ratio

Sex ratio is an important indicator of demographic development of rural-urban fringe area of Kolhapur city. The comparison study of male and female population of social and economic development of fringe area. The sex ratio is defined as the number of females per thousand males. The calculation of sex ratio formula,

$$\text{Sex ratio} = \text{No. of Females/ No. of males} * 1000$$

Sr. No.	Village	Sex Ratio 1981-2011			
		1981	1991	2001	2011
1	Shiye	975	929	877	902
2	Bhuye	939	944	939	910
3	Nigave Dhumala	953	906	902	921
4	Wadange	756	880	937	916
5	Chikhali	988	888	846	907
6	Ambewadi	942	984	995	924
7	Shinganapur	669	826	894	944
8	Nagdewadi	0	935	895	909
9	Balinge	942	942	895	908
10	Padali Kh.	927	943	913	934
11	Wadipir	1030	991	928	922
12	Kalambe-T-Thane	892	890	893	895
13	Pachgaon	882	913	893	904
14	Morewadi	932	876	909	956
15	Ujaiwadi	933	931	879	925
16	Sarnobatwadi	926	946	914	912
17	Uchgaon	899	820	885	921
18	Gandhinagar	943	890	910	917
19	Shiroli	921	857	879	889
20	Gokul Shirgaon	947	873	729	884



Source: Computed by Researcher based on District Census Handbook Kolhapur (1981-2011)

Educational status

Education is very important indicator of social development of rural-urban fringe area of Kolhapur city. Educational status decides the social as well as economic status of the region. Education is one of the key factors for overall growth and development of region.

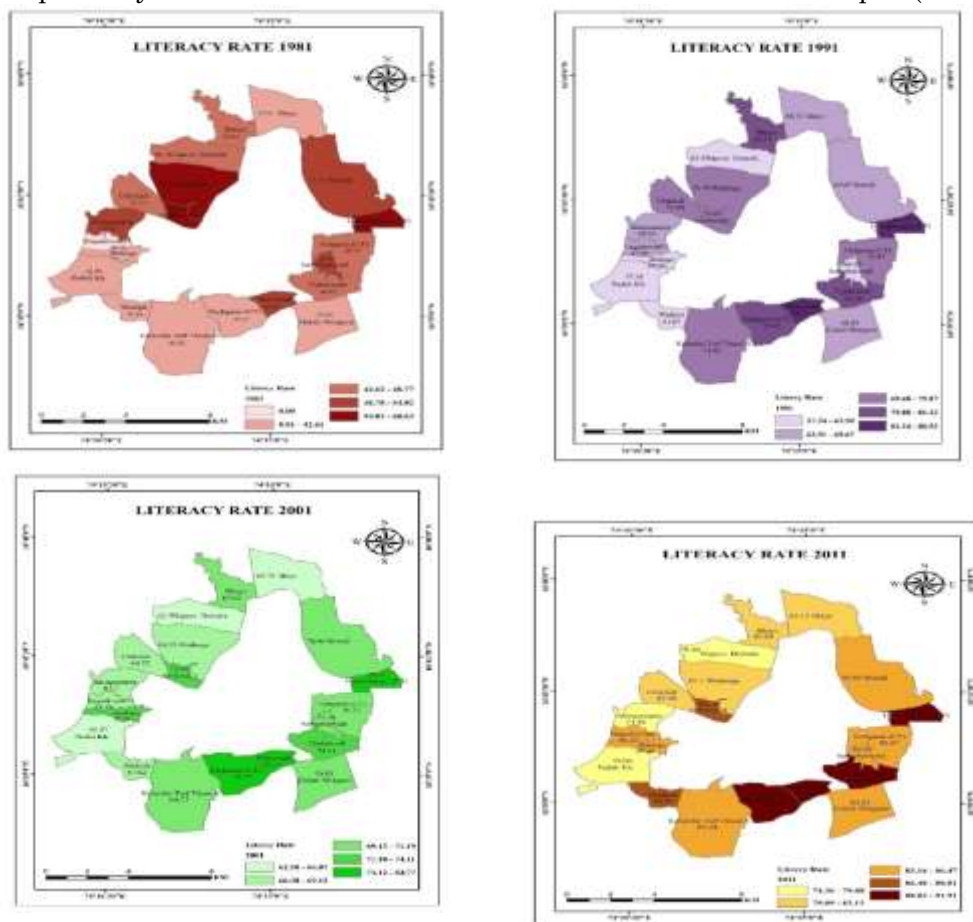
Literacy

Literacy is important indicator of fringe area development. Literacy in India is a key for social-economic progress. The literacy is defined as the ability of reading and writing of person (Census of India, 2011).

$$\text{Literacy Rate} = \frac{\text{Literate Population Age 7 and above}}{\text{Total Population Age 7 and above}} * 100$$

Literacy Rate					
Sr. No.	Village	1981	1991	2001	2011
1	Shiye	42.61	68.33	65.76	83.13
2	Bhuye	45.83	81.33	69.62	80.89
3	Nigave Dhumala	46.74	63.5	62.5	78.46
4	Wadange	56.52	74.79	68.55	81.1
5	Chikhali	47.52	72.44	69.12	82.08
6	Ambewadi	57.33	73.65	72.08	88.18
7	Shinganapur	52.82	69.22	67.3	74.36
8	Nagdewadi	0	67.93	68.86	86.25
9	Balinge	40.26	61.98	72.99	85.41
10	Padali Kh.	41.89	57.34	66.07	79.08
11	Wadipir	38.39	61.64	67.62	88.81
12	Kalambe-T-Thane	42.42	74.52	69.77	85.24
13	Pachgaon	37.45	77.61	76.79	90.75
14	Morewadi	54.01	84.31	82.77	91.65
15	Ujaiwadi	44.81	76.74	74.11	90.01
16	Sarnobatwadi	54.02	60.22	71.19	85.97
17	Uchgaon	48.77	75.07	70.77	86.47
18	Gandhinagar	60.63	88.53	78.71	91.91
19	Shiroli	52.11	69.67	70.86	85.65
20	Gokul Shirgaon	35.09	68.43	70.83	84.93

Source: Computed by Researcher based on District Census Handbook Kolhapur (1981-2011)



Educational Status

Sr. No.	Village	1981				1991			
		P	M	H	AC	P	M	H	AC
1	Shiye	1	1	0	0	3	1	1	0
2	Bhuye	1	1	0	0	1	1	1	0
3	Nigave Dhumala	1	1	1	0	1	1	1	1
4	Wadange	1	0	0	0	3	1	1	0
5	Chikhali	1	1	0	0	1	1	1	0
6	Ambewadi	1	1	0	0	1	1	0	0
7	Shinganapur	1	1	1	0	1	1	1	1
8	Nagdewadi	0	0	0	0	1	1	1	1
9	Balinge	1	1	0	0	1	1	1	0
10	Padali Kh.	1	1	0	0	1	1	0	0
11	Wadipir	1	0	0	0	1	0	0	1
12	Kalambe_T_Thane	1	1	0	0	1	1	0	0
13	Pachgaon	1	1	0	0	1	1	0	0
14	Morewadi	1	0	0	0	1	1	0	0
15	Ujaiwadi	1	1	0	0	1	1	0	1
16	Sarnobatwadi	1	1	0	0	1	1	0	0
17	Uchgaon	1	1	0	0	1	1	1	1
18	Gandhinagar	1	1	0	0	1	1	0	0
19	Shiroli	1	1	1	0	5	1	1	0
20	Gokul Shirgaon	1	1	0	0	1	1	0	1

Educational Institute

Sr. No.	Village	2001								
		P	M	S	PUC	C	I	Tr	AC	O
1	Shiye	3	1	1	1	1	0	0	0	0
2	Bhuye	1	1	1	0	1	0	0	0	0
3	Nigave Dhumala	2	2	1	0	0	1	1	1	0
4	Wadange	3	3	2	1	1	0	0	0	0
5	Chikhali	1	1	1	0	1	0	0	9	0
6	Ambewadi	1	1	0	0	1	0	0	0	0
7	Shinganapur	1	1	1	0	1	0	0	1	0
8	Nagdewadi	1	1	1	0	1	0	0	1	0
9	Balinge	1	1	1	0	1	0	0	1	0
10	Padali Kh.	1	1	1	0	1	0	0	0	0
11	Wadipir	1	1	0	0	1	0	0	1	0
12	Kalambe_T_Thane	1	1	1	1	5	0	0	0	1
13	Pachgaon	1	1	1	0	4	0	0	0	0
14	Morewadi	2	1	1	0	1	0	0	1	0
15	Ujalaiwadi	2	2	1	0	1	0	0	1	0
16	Sarnobatwadi	1	1	0	0	1	0	0	0	0
17	Uchgaon	2	2	2	0	4	0	0	0	0
18	Gandhinagar	1	1	1	1	5	0	0	0	0
19	Shiroli	4	3	3	2	2	0	0	0	0
20	Gokul Shirgaon	2	1	1	0	1	1	0	1	0

Sr. No.	Village	P	P	M	S	AS	E	M	M	P	IT	NFT	SS	Othe
		P	P	M	S	C	C	C	I	t	I	C	D	rs
1	Shiye	10	5	5	1	1	1	1	1	1	1	1	1	0
2	Bhuye	3	2	1	1	1	1	1	1	1	1	1	1	0
3	Nigave Dhumala	7	4	2	1	1	1	1	1	1	1	1	1	0
4	Wadange	15	7	5	1	4	1	1	1	1	1	1	1	1
5	Chikhali	7	4	3	1	1	1	1	1	1	1	1	1	0
6	Ambewadi	3	2	1	1	1	1	1	1	1	1	1	1	0
7	Shinganapur	8	5	2	1	1	1	1	1	1	1	1	1	0
8	Nagdewadi	5	2	2	1	1	1	1	1	1	1	1	1	0
9	Balinge	6	5	2	1	1	1	1	1	1	1	1	1	0
10	Padali Kh.	6	5	3	1	1	1	1	1	1	1	1	1	0
11	Wadipir	3	2	2	1	1	1	1	1	1	1	1	1	1
12	Kalambe_T_T hane	0	4	3	3	1	1	1	1	1	1	1	1	0
13	Pachgaon	0	4	3	3	1	1	1	1	1	2	1	1	0
14	Morewadi	0	5	1	1	1	1	1	1	1	1	1	1	0
15	Ujalaiwadi	0	2	2	1	1	1	1	1	1	1	1	1	2
16	Sarnobatwadi	5	3	1	1	1	0	1	1	1	1	1	1	0
17	Uchgaon	0	1 2	8	4	1	1	1	1	1	2	1	1	0
18	Gandhinagar	0	6	6	3	1	1	1	1	1	1	1	1	0
19	Shiroli	18	1 4	8	5	1	2	1	1	1	1	1	1	1
20	Gokul Shirgaon	0	4	3	2	1	1	1	1	0	0	0	0	0

Source: District census handbook of Kolhapur 1981-2011

P- Primary/Secondary School

H- Matriculation/Secondary School

M- Junior Secondary/ Middle School

AC- Adult Literacy Class/Canter

P- Primary School

C- College

M- Middle School

I- Industrial School

S- Secondary School

Tr- Training School

PUC- Senior Secondary

O- Other (Specify)

PP- Pre-primary School

MC- Medical College

P-Primary School

MI- Management Institute

ACS- Degree College Arts,Commerce and Science

M- Middle School

Pt- Polytechnic

SSD- Special School for Disabled

S- Secondary School

ITI- Vocational Training School

Others- Specify

SS- Senior Secondary School

NFTC- Non-formal Training Centre EC- Engineering College

Conclusions

- The population of Gandhinagar, Shiroli, Gokul Shirgaon, Pachgaon, and Ujalaiwadi villages has rapidly increased because these villages are close to city i.e., only 8 to 10 kms away from Kolhapur city and mostly Gandhinagar, Shiroli and Gokul Shirgaon are commercial areas. Therefore, here job opportunities are more. Pachgaon, Uchgaon, Kalmabe – T – Thane, Morewadi and Ujalaiwadi are the villages they almost look like city area and most of the high-class people who wants to construct bungalows and settled down in very calm and cool areas they have constructed their houses at these villages therefore here population is increasing.
- Even these villages are also well connected with city with city transportation. Here number of educational institutes are also located in Pachgaon, Uchgaon and Morewadi. These villages are also near to Pune Bangalore highway therefore population of these places is increasing day by day. But villages like Shiye, Bhuye, Wadange, Ambewadi and Wadipir are located on the Konkan highway they are little away from city, and they are separated from city by river

therefore they are less developed. Even in these villages most of the population is having agricultural land few of their family members doing farming and male are working in industrial sector, construction business and transportation services.

- Even kids from Pachgaon, Uchgaon, Kalmabe – T – Thane, Morewadi, and Ujlaiwadi are coming to city for schooling and students from cream area of city are going to school in these villages because most of the CBSC schools are in these areas. Because of proximity to city the literacy rate of Pachgaon, Uchgaon, Kalmabe – T – Thane, Morewadi, and Ujlaiwadi villages is also high. But in Shiye, Bhuye, Wadange, Ambewadi and wadipir as compared to above places literacy rate is low and they are coming to city for higher education.
- Above analysis shows that Pachgaon, Uchgaon, Kalmabe – T – Thane, Morewadi, and Ujlaiwadi these are the villages developed because of city and proximity to city. But Shiye, Bhuye, Wadange, Ambewadi and wadipir these villages are not much developed because they have separated because of the river and here dominant activity is agriculture. Gandhinagar, Shirol and Gokul Shirgaon are the commercial area who gives economic opportunities to city population therefore they are important areas in the fringe.
- It shows that these fringe areas serve city population like Shiye, Bhuye, Wadange, Ambewadi and wadipir giving agriculture products. Gandhinagar, Shirol and Gokul Shirgaon provides income and Pachgaon, Uchgaon, Kalmabe – T – Thane, Morewadi, and Ujlaiwadi provides residential area and educational facilities to city population.

Problems

1. Because of growing population density rate of land is increasing in Gandhinagar, Shirol, Gokul Shirgaon, Pachgaon, Uchgaon, Kalmabe-T-Thane, Morewadi, and Ujlaiwadi.
2. It creates stress on public utility services and services like police station, sewage disposal etc.
3. Here population is increasing but health facilities, banking facilities are less therefore they must come to city for these facilities.
4. Even entertainment facilities are also not here in the fringe areas.
5. These are also facing problems regarding security, quality of road, and scarcity of water.
6. Therefore, we are suggesting that most of the places like Pachgaon, Uchgaon, Kalmabe-T-Thane, Morewadi should include into the city otherwise taxes to the residents should impose based on their economic activities, these areas should have separate police stations, bank facilities etc. transportation connectivity should be more. Roads must be well constructed.

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