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## SPATIAL VARIATIONS IN RURAL-URBAN SEX RATIO IN AHMEDNAGAR DISTRICT OF MAHARASHTRA

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### Abstract:

*Sex composition is one of the significant demographic characteristics of population. In any population, distribution by sexes is generally unequal. The existing sex ratio in any area is determined by three basic factors. These are sex ratio at the time of birth, differences in the mortality rates of the two sexes, at different ages and differences in the migratory ethos of the two sexes (Cleark, 1960). In all the demographic narratives the low sex ratios are taken as a stark indicator of the inferior position of women in India (Miller 1981; Basu 1992; Mayer 1999). Sex ratio is one of the important indicators of equity between sexes in society.*

*The present study aims to examine the spatial pattern and fluctuation of rural-urban sex ratio during 2001-2011. For the purpose of present study taluk has been taken as a basic unit of investigation. The period selected for the present study is two decade from 2001-2011. The proposed study is entirely based on secondary data. Present analysis shows that males and females are unequal and also talukwise magnitude of rural-urban inequality varies in the study region. In fact, present rural-urban sex ratio shows opposite situation in 2011, compare to 2001 census. In 2001, we found rural sex ratio is higher than urban sex ratio, while in 2011, urban sex ratio is higher than rural sex ratio.*

### KEYWORDS:

Spatial variation, sex composition, sex ratio, fluctuation.

### INTRODUCTION:

Sex composition is one of the significant demographic characteristics of population. The separate data for male and females are important for various types of planning and for the analysis of other demographic characteristics such as natality, mortality, migration, marital status, economic characteristics, etc. the balance of sexes affects the social and economic relationship within a community. Declining sex ratio is an important phenomenon for demographer, sociologist, geographers, planners, medical and public health worker.

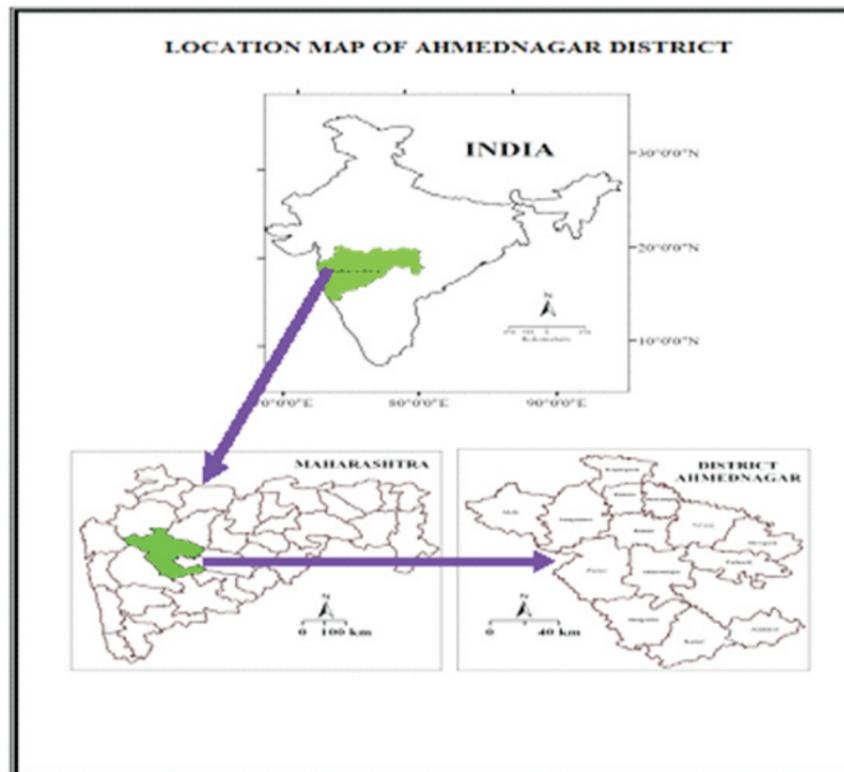
In India, in general and child sex ratio is higher in rural areas than urban areas. Similar trend is observed in most of the states. In general, highest decline in sex ratio is recorded in urban areas. Drastic decline is observed in the urban areas of Harayana, Gujrat and Utter Pradesh, while, heavy loss is found in both rural and urban areas of Punjab. Similarly in Maharashtra also, the magnitude of female child loss is higher, in rural areas than the urban areas. In the Indian context, a sex ratio of 950 and above can be considered as favourable.

As per 2011, rural sex ratio is 934, while urban sex ratio is 936. Which shows interestingly rural – urban sex ratio remain adverse to female but, sex ratio is decreasing very rapidly in rural areas whereas it is slowly increased in urban areas of study region

#### THE STUDY REGION

Ahmednagar district is selected for present study purpose. Ahmednagar district is situated partly in the upper Godavari basin and partly in the Bhima basin, occupying a somewhat central position in the Maharashtra state. It lies between 180 2' and 190 9' north latitude and 730 9' and 750 5' east longitude. It is surrounded by Nashik and Aurangabad districts to the north, Beed and Osmanabad districts to the east, Solapur and Pune districts to the south and Pune and Thane districts to the west. Topographically the district can be divided in to three parts. i.e. the Sahyadry ranges, the plateau region and the Bhima and Godavari basins. Ahmednagar district is far away from the Arabian Sea. The climate of the district is generally hot and dry, except during south west monsoon season. The average annual rainfall in the district is 500 mm.

FIG. NO. 1 LOCATION MAP OF AHMEDNAGAR DISTRICT



The district mostly lies in the rain shadow to the east of the Sahyadry Mountain. The soil of study region can broadly classified in to three groups such as, black, red and laterite soil. The study region covers an area about 17,412 sq. km. and it has acquired 5.54% area of Maharashtra state. The district has 14 tahsils with 1581 villages.

#### OBJECTIVES

1. To examine the spatial pattern of rural and urban sex ratio in the study region.
2. To know the fluctuation of rural-urban sex ratio during 2001 to 2011.

**RESEARCH METHODOLOGY**

Tahsil has been taken as a basic unit of investigation for study purpose. The period selected for the present study is from 2001 to 2011. The present study is entirely based on secondary data which is collected from Socio-Economic Review and District Statistical Abstract of Ahmednagar, Census of India, Census Handbook of Maharashtra and Ahmednagar District, District Gazetteer and also concern information is collected from various published thesis, articles, books and journals etc. The collected data will be processed and presented by using appropriate quantitative and cartographic techniques. Sex ratio in general and rural-urban is computed by using following formula.

$$\text{Sex ratio} = \frac{P_f}{P_m} \times 1000$$

Where,

Pf= Total No. of females

Pm=Total No. of Males

**SPATIAL PATTERN OF RURAL-URBAN SEX RATIO (2001 -2011)**

It is very interesting to note that the Sex ratio was increasing in urban area from 908 in 2001 to 936 in 2011, whereas it is continue to decline in rural area from 948 in 2001 to 934 in 2011 in the study region. Table No. 1 shows, spatial pattern of rural- urban sex ratio.

**TABLE NO. 1 TAHSILWISE RURAL-URBAN SEX RATIO IN AHMEDNAGAR DISTRICT FROM 2001 TO 2011**

Sr. No.	TAHSIL	2001		2011	
		RURAL	URBAN	RURAL	URBAN
1	Akola	974	0	970	910
2	Sangamner	951	921	937	946
3	Kopergaon	931	926	928	959
4	Rahta	941	917	940	931
5	Shrirampur	941	963	942	981
6	Nevasa	937	0	928	0
7	Shevgaon	953	0	942	0
8	Pathardi	957	906	923	909
9	Nagar	934	881	920	924
10	Rahuri	937	926	931	934
11	Parner	988	0	955	0
12	Shrigonda	939	933	920	928
13	Karjat	933	0	910	911
14	Jamkhed	952	940	910	955
District Total		948	908	934	936

Source:1) Census of India, 2001.

2) Provisional Population Totals, Census of India, 2011.

**SPATIAL PATTERN OF RURAL-URBAN SEX RATIO (2001)**

Table No.1 and Fig. No.2 indicates that the Tahsil wise rural-urban sex ratio differential in the study region. As per 2001 census, rural sex ratio is highest in Parner tahsil (988) while, Kopargaon tahsil shows low rural sex ratio (931) as compared to district average. Urban sex ratio is lower than the rural sex ratio of the study region. Maximum urban sex ratio was observed in Shirirampur tahsil and minimum in Nagar tahsil i.e. 963, 881 respectively as compare to district average.

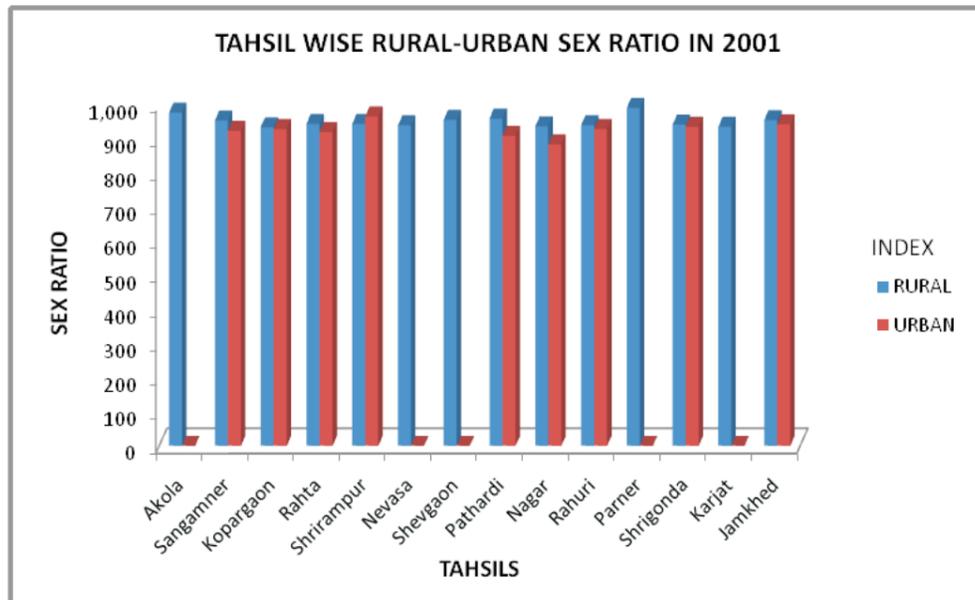
Tahsil wise rural –urban sex differentials show that, 6 tahsils in above district average whereas 8 tahsils in below average with respect to rural sex ratio. Rural sex ratio is high in the tahsils such as, Sangamner (951), Jamkhed (952), Shevgaon (953), Pathardi (957), Akola (974) and Parner (988).The scarcity of water, uneven topography and less fertile soil are the major geographical factors responsible for the less agricultural development. It is observed that sex selective out migration taken place to seeking jobs leads to high rural sex ratio in the tahsils, which are located in drought prone area of the study region. Low sex ratio is observed in tahsils Viz., Kopargaon (931), Karjat (933), Nagar (934), Rahuri (937), Nevasa (937), Shrigonda (939), Shirirampur (941), Rahata (941).

Urban sex differentials in the study region shows that, 7 tahsils in above district average, whereas 2 tahsils below the average (908). Low urban sex ratio is observed in tahsils Viz. Pathardi (906) and Nagar (881). Remaining tahsils such as, Rahata (917), Sangamner (921), Kopargaon (926), Rahuri (926), Shrigonda (933), Jamkhed (940), Shirirampur (941) show high sex ratio.

Predominantly agricultural and developed tahsils, such as Kopargaon, Sangamner, Rahuri, Rahata, Shrigonda, Shirirampur show high sex ratio. Male out migration for employment purpose from drought prone and agriculturally less developed tahsil towards agriculturally developed tahsils also because of large cost of living in urban areas, people who migrate to urban areas keep their spouses in villages leads to sex ratio is decreasing in rural areas and increasing in urban areas.

There are also many reasons for low sex ratio in the study region, the son preference is still prevalent, reproductive death rate among females, pre-natal and post natal deaths of females are common despite the low against them.

**FIG. No. 2. TAHASIL WISE RURAL-URBAN SEX RATIO IN 2001**



**SPATIAL PATTERN OF RURAL-URBAN SEX RATIO (2011)**

In 2011, rural sex ratio is highest in the Akola tahsil (970) while, Jamkhed tahsil shows lowest rural sex ratio (910), as compared to district average. Maximum urban sex ratio was observed in Shirampur tahsil and minimum in Pathardi tahsil i.e. 981, 909 respectively as compare to district average. Fig. No.3 shows rural-urban sex ratio variation in 2011.

Rural-urban sex ratio shows that, 6 tahsils in above district average whereas 8 tahsils below average with respect to rural sex ratio. Rural sex ratio is high in the tahsils such as, Sangamner (937), Rahata (946), Shevgaon (942), Shirampur (942), Akola (970) and Parner (955). Low sex ratio is observed in tahsils Viz., Jamkhed (910), Karjat (910), Nagar (920), Shrigonda (920), Pathardi (923), Kopargaon (928), Nevasa (928), and Rahuri (931).

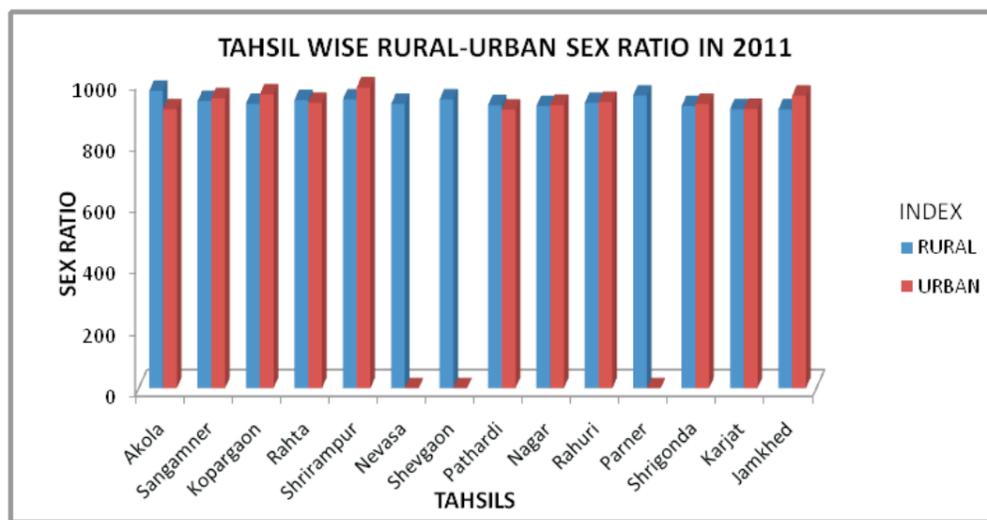
Tahsil wise urban sex differentials shows that, 4 tahsils in above district average whereas, 7 tahsils below the average. Low urban sex ratio is observed in tahsils Viz. Pathardi (909), Akola (910), Karjat (911), Rahata (921), and Nagar (924), Shrigonda (928) and Rahuri (934). Remaining tahsils such as, Sangamner (946), Kopargaon (959), Jamkhed (955), Shirampur (981) shows high & above average sex ratio. The sex ratio of urban areas has always been appreciably lower than that of rural areas throughout the country because of the greater preponderance of males in rural to urban streams of migration (Singh, 1988).

In the study region sex ratio reveals that urban sex ratio is greater than the rural sex ratio in some tahsils, because of both male-female rural-urban migration increases in last decade. In fact, in the study region in the rural-urban migration males outnumber female, but the rate of rural female migration towards urban areas increases rapidly than the males.

It is also observed in the study region that positive relation in between literacy and migration of female. In 2011, female literacy rate increases by higher rate than the male literacy, leads to increase in rural to urban migration of both male and females for the purpose of education and employment.

Present analysis denotes declining sex ratio is the serious problem of the study region. The process of urbanization, migration pattern and other socio-economic factors affecting on sex ratio, in which Migration is the one of the important factor, which is affecting on imbalance in sex ratio in urban and rural areas.

**FIG. No. 3 TAHSIL WISE RURAL-URBAN SEX RATIO IN 2011**



**RURAL-URBAN SEX RATIO FLUCTUATION FROM 2001 To 2011**

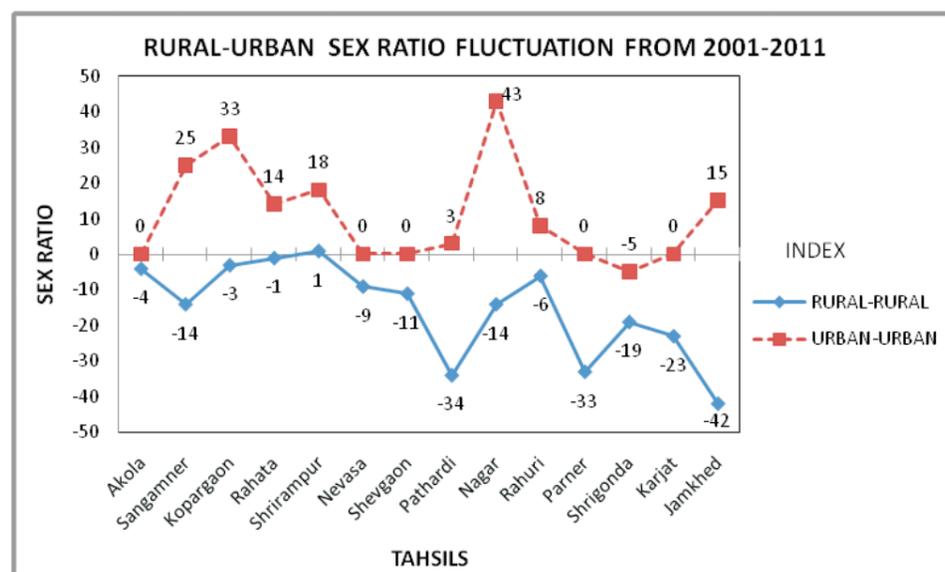
Fig. No. 4 shows rural-urban sex ratio fluctuation in between 2001 to 2011. In fact, in Ahmednagar district we found drastic changes in general and rural-urban sex ratio in last decade.

Rural sex ratio shows tahsil wise negative fluctuation in all the tahsils except Shirampur tahsil (+1) in the study region. The highest negative fluctuation in rural sex ratio is exist in Jamkhed tahsil (-42), followed by Pathardi (-34), Parner (-33), Karjat (-23), Shrigonda (-19), Sangamner (-14), Nagar (-14), Shevgaon (-11), Nevasa (-9), Rahuri (-6), Akola (-4), Kopargaon (-3) and lowest negative fluctuation exist

in Rahata (-1).

Positive Fluctuation in Urban sex ratio is observed in all the urban centers, except negative fluctuation exists only in Shrigonda tahsil with (-19). Highest Positive Fluctuation in urban sex ratio is observed in Nagar tahsil (+43), followed by positive fluctuation found in the tahsils such as Kopargaon (+33), Sangamner (+25), Shrigonda (-19), Shrirampur (+18), Rahata (+14), Rahuri (+8), whereas lowest positive change found in the Pathardi tahsil (+3).

**FIG. NO. 4 RURAL – URBAN OVERALL SEX RATIO FLUCTUATION IN AHMEDNAGAR DISTRICT FROM (2001-2011)**



Source: Computed by authors

High and Positive Fluctuation in urban sex ratio is observed in Nagar tahsil due to socio-economically advanced, largest urban center, district headquarter, industrial and business center and source area of employment. The higher degree of urbanization and consequent lower proportion of joint families in western Maharashtra; as a result of development of non-agricultural activities, where large joint families are not considered an asset (Sawant and Khan, 1982).

Along with socio-economic development and rapid urbanization in the study region, women work participation rate increases in secondary and tertiary activities such as, govt. services, private sector, banking, insurance, industries and other services etc, it leads to more rural out migration of educated females towards urban centers in the study region. It is observed that sex ratio of workers and migrants affecting on the rural-urban sex ratio of the study region. Analysis shows generally sex ratio increases in urban area, while decreases in rural area.

It is observed that inequality in between males and females and also tahsilwise magnitude of rural-urban inequality varies in the study region. As per 2011, rural sex ratio is 934, while urban sex ratio is 936. Which shows interestingly rural-urban sex ratio adverse to female but, sex ratio is decreasing very rapidly in rural areas whereas it is increased in urban areas of study region.

**CONCLUSION**

1. Present analysis reveals that males and females are unequal and also tahsilwise magnitude of rural-urban inequality varies in the study region. In fact, present rural-urban sex ratio shows opposite situation in 2011, compare to 2001 census. In 2001, we found rural sex ratio is higher than urban sex ratio, while in 2011, urban sex ratio is higher than rural sex ratio.

2. Sex selective out migration especially male for employment purpose from agriculturally less developed tahsil towards the agriculturally developed and urbanized tahsils leads to sex ratio is increasing in rural areas and decreasing in urban areas in 2001. Whereas female migration towards urban centers due

increasing socio-economic status of female in urban area, availability of various educational and employment opportunities leads to sex ratio increasing in urban areas in 2011.

3.It is observed that the proportion of female workers and migrants affecting on the imbalance in rural-urban sex ratio of the study region in 2011.

4.Rural-urban sex ratio fluctuation clearly shows interestingly rural-urban sex ratio adverse to female but, sex ratio is decreasing very rapidly in rural areas whereas it is slowly increased in urban areas of study region during 2001 to 2011.

5.Rural-urban sex ratio is adverse to female, not only because of sex selective migration but also strong son preference and couples are moving towards a smaller family size and wants at least one or two sons, so they take the help of modern technology to detect the sex of foetus.

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