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# **Changing Scenario of Sex Ratio in Tumkur District: A Study**

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Abstract: The Sex-ratio is also one of the main components of demographic study from which one can identify the strength of male and female population. Thus numerical measurement of sex composition is often expressed is terms of sex ratio, this ratio is calculated differently in different countries. In India the sex ratio is calculated in terms of number of females per thousand males. Secondary data is used for analysis of sex ratio in Tumkur district that is 2001 to 2011.. According to 2011census, out of the total population 2678980 persons, 1350594 males and 1328386 females, forms the sex ratio of Tumkur 984 female's per1000 males. The 2011 census recorded a sex ratio of Tumkur district 984 females' per1000 males. This is much higher than that of the state ratio of 973. The sex ratio of the district shows continuous increasing trend since 1961. It is found true in the present study where one can observe differences in male and female ratio in rural and urban areas. For the Tumkur district as whole sex ratio of Karnataka in the year 2011 is 968 females per thousand males. But in India 940/1000 males and it is below the state average district average. In the year 1981 the sex ratio was 961 females per 1000 males whereas. In 1991 it decreased by small fraction to 959 females per 1000 males, but by the year 2001 itincreasedto966/1000 males. This study has been attempted to know sex ratio in Tumkur districts.

Key Words: Sex Ratio, Changing Scenario, Population, Tumkur District,

#### **1. INTRODUCTION :**

Sex ratio is most significant demographic indicator of an area which play pivotal role in assessing the nasality, mortality, occupational structure and migration character of the population. Hence the analysis of sex ratio is the vital importance. The numerical expression of male and female is sex composition of an area. It is an important aspect in the study of population characteristics. In other words the proportion of males and females or ratio between them is a sex ratio. For example sex ratio of theworldis986 thatis986 females per 1000males. Sex Ratio is an import ant indicator to measure the extent of prevailing equality between male and female population of a society specified point of time. The separate data of males and females is important for various types of planning and for the analysis of other population aspects. Sex ratio directly influences the supply of labor. If proportion of males in the total population is larger than that for females, the supply of man power is more. If proportion of males in a population is large, age at marriage for girls declines. If age at marriage for females declines birth rate increases and total population starts to grow. If proportion of males in total population is large, generally death rate is high. While if the proportion of female is large, normally the death rate will be low. The Proportion of female's in total population influences status of females in the society and participation of females in the economic activity. Sex ratio will be affected by Fertility, Mortality, Maternal mortality, Wars and others. Under nutrition mortality among males is higher than that of females. Generally, sex ratio among migrants is not balanced. Males dominate among long distance migrants and also among those who move due to economic reasons. Franklin (1956, p-168) rightly observes that sex ratio was an index of economy prevailing in an area and was useful tool for regional analysis. The profound effect of the sex ratio upon the other demographic elements like population growth, marriage rates, occupational structures, has also been well recognized (Shyrock 1976, p-105). Thus, the knowledge of sex ratio is essential for understanding the employment and consumption patterns and social needs



etc. of a community. Trewartha (1953) rightly observed that the proportion of two sexes is fundamentals to the geographic analysis of a region. Because it is not only an important feature to the landscape but it also influences the other demographic elements significantly and such provides an additional means for analyzing the regional landscape. The numerical measurement of sex composition of a population is often expressed in terms of sex ratio. Sex ratio is defined as the number of female's per thousand males. It is an important and useful indicator to assess relative surplus or deficit of men or women in a given population at that point of time. There are more men than women in both India and Karnataka. It is evident from the table that the sex ratio (femalesper1000males) islower than 1000 throughout the period 1901 to 2001. The graph shows that sex ratio per 1000 males was quite better during 1901 for Karnataka (983) and further it has been declined to 965 in 2001. Female mortality was higher than male mortality is the reason for the sex ratio lower than 1000 in all the census periods. Karnataka state is better positioned in sex ratio when compare to all India data. It has been observed marginal improvements in sex ratio during the periodsof 1981 and 2001 in Karnataka.

## 2. STUDYAREA :

Tumkur districts selected for the present study. Many geographical characteristics like Rainfall, irrigation, urbanization, industrialization etc. are considered for the choice of topic. The study area is influenced by the state capital. The geographical aspects are very impotent to understand the changing patternof population of an area and also it exhibits the potentialities of that particular area for its development. Therefore an attempt is made to know the geographical backgroundofTumkurdistrict.ThenameofthedistrictTumkurhadbeenderivedfromTUMKURU and TUMMEGURU this place is famous for Leucasaspera. Tumkur district has a few places like Iraka Sandra of Koratagere taluk, Nedagallu, having great historical impotence. Recently, the name of the district is changed as Tumakuru, for the convenience of census data analysis the old name is mentioned here. Tumkur district has irregular shapes with peculiar features. The North latitudes and76<sup>o</sup>20' and 77<sup>o</sup>31' East longitudes. The district has irregular shapes with peculiar features. The North Eastern part of the district is totally detached from the remaining part of the district. This place named Pavagada taluk and surrounded by the Andrapradesh, western part of this taluk with very short stretch to touches the Chitradurga distirct. The district is bounded on the north by Annantpur district by Andra pradesh, on the south by Mandya distirct on the east by Chikkaballapur, Bangalore rural and Ramanagar disritct and west bounded by Hassanand Chitradurga districts of Karnataka state. The mid-west part of the district too touches Chikkamagalur district. The district has an area of 10,597 km<sup>2</sup>, accounts 5.5% of the total geographical area of the Karnataka state.

# 3. METHODOLOGY :

Secondary data were used for this study which is collected from survey of India and district statistical department MS Building Bangalore. The simple formula has been used for calculating the Sex Ratio.

Number of females Sex-Ratio=-----X1000

Number of Males

## 4. OBJECTIVES :

- To Know the sex ratio of Tumkur district
- To Study the changing scenario of sex ratio in the study region.

# 5. DISCUSSION :

Table1: Trend of Sex Ratio in India,	Karnataka and Tumkur District
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Sl. No	Census year	India	Decadal Variation	Karnataka	Decadal Variation	Tumkur District	Decadal Variation
1	1901	972		983		985	
2	1911	964	-8	981	-2	977	-8
3	1921	956	-8	969	-12	958	-19
4	1931	952	-4	965	-4	962	4
5	1941	947	-5	960	-5	951	-11
6	1951	948	1	966	6	958	7
7	1961	943	-5	959	-7	956	-2



8	1971	931	-12	957	-2	957	1
9	1981	934	3	963	6	961	4
10	1991	927	-7	960	-3	959	-2
11	2001	933	6	965	5	966	7
12	2011	940	7	973	8	984	18

Source: Census of India1901 and 2011

As per figures depicted in the above chart, sex ratio of India is continuously decreased from 1901 to 1941. In the very next decade 1951, it was increased by one unit and became 946 from 945 females per 1000 males. Again it was decreased by 05and 11 units in the next 1961 and 1971 census years. After 1971 census, the trend did not remain constant but increases in one decade and declines in next decade. From1991 the sex ratio of India shows trend of improvement as 927, 933, 940 ratio in1991, 2001 and 2011 census respectively.

#### Sex ratio in Tumkur District

Accordingto2011census, out of the total population **2678980** persons, **1350594** males and **1328386** females, forms the sex ratio of Tumkur 984 female's per1000 males. The 2011 census recorded a sex ratio of Tumkur district 984 females' per1000 males. This is much higher than that of the state ratio of 973. The sex ratio of the district shows continuous increasing trend since 1961. It is found true in the present study where one can observe differences in male and female ratio in rural and urban areas. For the Tumkur district as whole sex ratio varies from rural to urban areas and from one decade to another as well as from one taluk to another. Sex ratio of Karnataka in the year 2011 is 968 females per thousand males. But in India 940/1000 males and it is below the state average district average. In the year 1981 the sex ratio was 961 females per 1000 males whereas. In 1991 it decreased by small fraction to 959 females per 1000 males, but by the year 2001 itincreasedto966/1000 males.

#### Sex ratio at Taluk level

There are large Spatio-temporal variations in the sex ratio at taluk level. According to 1991 census, it is observed that the highest sex ratio was observed in Kunigal taluk with1005 and lowest was found in Tumkur taluk with 910 females per1000 males. Where as in the year 2001 the sex ratio increased slightly and it is 924females to 1000 males in the district. The lowest was observed in Tumkur taluk (924) but Kunigal continued to be the highest. In the 2001 census and observe the growth rate of these three decade in Kunigal taluk continues increase of growth rate of sex ratio (+0.090% (1991) to +1.79% (2001), except Koratagere taluk (-0.21%) growth rate of sex ratio has slightly increased in remaining taluks.

Sl.No	Taluks	1901	1911	1921	1931	1941	1951	1961	1971	1981	1991	2001	2011
1	ChikkanayaKanahalli	990	979	955	956	943	947	937	956	968	974	985	1009
2	Gubbi	1003	984	949	962	957	964	967	981	976	971	976	987
3	Koratagere	953	919	922	943	934	939	959	957	964	967	965	987
4	Kunigal	1018	1027	1000	1004	998	1004	999	996	996	1005	1023	1002
5	Madhugiri	947	957	934	942	930	940	940	941	953	953	962	989
6	Pavagada	948	940	940	938	915	924	943	942	942	944	955	982
7	Sira	975	964	949	961	921	953	949	960	955	956	960	974
8	Tiptur	993	987	983	978	976	965	951	953	957	970	978	1002
9	Tumkur	984	962	951	943	943	945	939	920	935	910	924	945
10	Turuvekere	1073	1088	1021	1016	1004	1008	984	989	993	998	1001	1013
	District	985	977	958	962	951	958	956	957	961	959	967	984

 Table2: Taluk Wise Trend of Sex Ratio in Tumkur District (1901-2011)

Source: Census of India Publication.

From some of the recent studies it has been observed that compared to pre1970's sex ratio s in the state barring coastal district have significantly declined. Earlier, decadal sex ratio was higher and shows the compassioned society. With the improving medical facilities, sex ratio shows decline due to still continuing discrimination of female in a male child preferring society. Only in post 1991 census, sex ratio starts to increase due to the growth of female literacy and at the same time, central & state governments have taken several steps to protect and empower girl child there is a



marginal rise in female population. The disparities in the sex ratio between rural and urban area of the district is not much glaring. The sex ratio in the rural area of the district is 984 females to 1000males, its far better than the state as well as national sex ratio during 2011cesus. The same tendency is continued in the sex ratio of urban areas also. The difference between rural and urban area in the sex ratio is just one. Among the taluks, the overall sex ratio is varies significantly. Turuvekere, Chikkanayakanahalli, Kunigal and Tiptur taluks have better sex ratio i.e. more than1000 females per thousand males, of which Turuvekere has the highest sex ratio with1013 females. The least sex ratio is observed in Tumkur taluk and it has only 954 females /thousand males. A little insight in to rural areas shows that, as mentioned earlier, four taluks namely Turuvekere, chikkanayakanahalli, Kunigal and Tipturtaluks have better sex ratio i.e. more than 1000 females per thousand males. There is a drastic change in Sex ratio of Tumkur taluk, it is reduced to 932 females per thousand males and exhibits below the national average, reason may be the unemployed male population migrated to wards state capital at the time of enumeration. During the period, sex ratio in the urban area of the district about 984 females per thousand males. Between the 2001 and 2011 census period sex ratio increased about 46 females per thousand males. At the taluk level it varies considerably. Among the taluks urban area of Chikkanayakanahalli taluk has highest sex ratio with 1025, followed by Koratagere and Turuvekere taluks with 1009 and 1003respectively. Rest of the urban areas of the district exhibits the sex ratio below 1000, urban areas of Kunigal taluk records the least sex ratio with 972in the district.

		Sex Ratio (2001) Sex Ratio (2011)					Dec	Decadal Changes		
Sl.No	Taluks	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1	Chiknayakanahalli	986	984	997	1009	1006	1025	23	21	27
2	Gubbi	977	979	946	987	986	999	10	7	53
3	Koratagere	966	966	971	987	985	1009	21	19	38
4	Kunigal	1024	1034	959	1002	1007	972	-22	-27	13
5	Madhugiri	965	967	941	989	988	999	24	20	58
6	Pavagada	958	959	947	982	981	992	25	22	45
7	Sira	961	966	937	974	972	981	13	6	43
8	Tiptur	977	988	945	1002	1007	988	24	18	43
9	Tumkur	925	925	926	954	932	976	28	6	50
10	Turuvekere	1001	1008	940	1013	1014	1003	12	6	63
	District	967	975	938	984	983	984	17	8	46

## Table.3: Taluk wise Sex Ratio in Tumkur District (2001-2011)

Source: Census of India2001 and 2011

## Table4.Taluk wise Sex Ratio of SC & ST population in Tumkur District (2001-2011)

		Se	Sex Ratio (2001)			x Ratio (2	011)	Changes		
Sl.No	Taluks/ year	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1	Chiknayakanhalli	975	976	956	1004	1001	1027	29	25	71
2	Gubbi	974	974	977	992	988	1055	18	14	78
3	Koratagere	963	960	995	1004	1004	1004	41	43	9
4	Kunigal	1036	1043	976	1026	1035	967	-9	-8	-9
5	Madhugiri	953	958	883	990	986	1030	37	28	147
6	Pavagada	954	954	959	987	986	999	33	32	41
7	Sira	960	965	925	979	976	998	18	12	74
8	Tiptur	996	1005	953	1029	1035	1003	33	30	50
9	Tumkur	941	955	914	967	959	980	26	4	67
10	Turuvekere	996	996	998	1030	1020	1133	34	25	135
	District	964	969	932	991	990	<b>998</b>	27	21	66

Source: Census of India 2001 and 2011



#### Sex ratio of SC& ST population

Table 4.4 explained about the sex ratio of SC & ST population in Tumkur district during 2001 and 2011 census years. In 2001 SC & ST sex ratio is 964, which is below the overall sex ratio of the districti.e.,967in2001 but it has increased to 991in 2011 which is higher than overall sex ratio of the district i.e., 984 in the same period. Sex ratio of SC & ST population in the rural area is more than the district average. Sex ratio of SC & ST population is more in Kunigal Taluk during 2001 & 2011, and it is more than district average and state average, followed by Koratagere, Turuvekere & Tiptur Taluk. Taluk wise Sex ratio of SC & ST population both in Urban & Rural area of Tumkur district is increasing since 2001, excepting Kunigal Taluk. Decadal growth rate of sex ratio is more in Koratagere followed by Madhugiri. Growth of urban sex ratio in Koratagere Taluk is just 9 and it has increased about 41in the rural areas of the Taluk. Sex ratio in Kunigal taluk is decreased from 1036 in2001 to 1026 in 2011. The Sex ratio in the age group 0-06 year shows positive trend except in three taluks viz Kunigal, Turuvekere, Pavagada, Which is rapidly declining in Tumkur district than the state& Country average. As per 2011 census Tumkur district has the sex ratio about 959 between 0-06years age group (child sex ratio), but it was 947 in 2001. According to 2011 census, Gubbi and Tiptur taluk has highest child sex ratio where as Pavagada taluk has least child sex ratio.

Table 4.5 depicts the child sex ratio of rural and urban area during 2001 &2011. In general, child sex ratio of urban area is better compared to sex ratio of rural area in Tumkur district during both census periods. At taluk level the child sex ratio varies considerably. Among the taluks rural area of Chikkanayakanahalli and Tiptur taluk bothhave highest child sex ratio with 995, followed by Gubbi taluk with 974 females perthousand males. Rural area of Kunigal taluk records the least child sex ratio with 930female children in the district. The same tendency is continued in the urban area of the district

		2001				2011		Decadal change (2001 -2011)		
Sl.No	Taluk	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1	Chikkanayakanahalli	969	965	1002	993	995	985	24	30	-17
2	Gubbi	955	956	931	970	974	922	15	18	-9
3	Koratagere	943	942	958	965	964	975	22	22	17
4	Kunigal	971	975	948	929	930	928	-42	-45	-20
5	Madhugiri	952	957	899	964	966	955	12	9	56
6	Pavagada	938	935	966	928	932	900	-10	-3	-66
7	Sira	939	942	922	953	947	977	14	5	55
8	Tiptur	950	956	902	981	995	947	31	39	45
9	Tumkur	940	931	950	964	961	967	24	30	17
10	Turuvekere	957	957	957	929	930	918	-28	-27	-39
	District	947	949	946	959	959	959	10	10	13

 Table5: Taluks Wise Sex Ratio of 0 to 6years Age Population in Tumkur District (2001-2011)

Source: Census of India2001 and 2011

#### Table6: Village wise Sex Ratio in Tumkur District (2001)

		<u> </u>	Number of Villages have the Sex Ratio above the average							
			Dist Avg	g = 967	State Avg	g= 965	National Avg = 933			
Sl.No	Taluk	Total villages	Villages	%	Villages	%	Villages	%		
1	Chikkanayakanahalli	221	139	62.9	142	64.3	175	79.2		
2	Gubbi	328	189	57.6	194	59.1	248	75.6		
3	Koratagere	236	107	45.3	108	45.8	155	65.7		
4	Kunigal	294	242	82.3	243	82.7	267	90.8		
5	Madhugiri	298	153	51.3	156	52.3	207	69.5		
6	Pavagada	145	66	45.5	67	46.2	103	71.0		
7	Sira	235	124	52.8	126	53.6	166	70.6		
8	Tiptur	227	146	64.3	147	64.8	191	84.1		
9	Tumkur	358	176	49.2	179	50.0	236	65.9		
10	Turuvekere	232	161	69.4	163	70.3	195	84.1		
	District	2574	1503	58.4	1525	59.2	1943	75.5		

Source: Census ofIndia2001



#### Sex Ratio at village level

Sustain analysis revels that sex ratio at village level is much glaring. A glance at table 4.6, it indicates that, Villages are classified into three categories based on the sex ratio like, Villages which have sex ratio more than district average ,state average& national average. According to 2001 census there are 2574 villages in Tumkur district, of which,1503 villages (58.4%) have more than district average sex ratio i.e.,965 and 1943 villages(75.5%) have more than national average sex ratio i.e.,933. Table also indicates that, National average sex ratio is less than the district average and state average. Out of ten taluks Kunigal taluk has highest percentage of villages (82.3%), which have the sex ratio more than district average, as well as state and national average. Less number of villages (45.3%) in Koratagere taluk have the sex ratio more than district, state& national average.

		abic/. Villag	c wise bea k		ullikul Disti i	Ct (2011)					
			Number of Villages have the Sex Ratio above the average								
Sl.No	Taluk	Total	Dist Avg =	<b>= 984</b>	State Avg	g= 973	National Avg =94	0			
		Villages	Villages	%	Villages	%	Villages	%			
1	C.N.Halli	222	133	59.9	149	67.1	182	82.0			
2	Gubbi	331	182	55.0	192	58.0	242	73.1			
3	Koratagere	235	122	51.9	129	54.9	165	70.2			
4	Kunigal	294	189	64.3	206	70.1	239	81.3			
5	Madhugiri	302	144	47.7	170	56.3	220	72.8			
6	Pavagada	149	77	51.7	87	58.4	119	79.9			
7	Sira	234	97	41.5	118	50.4	170	72.6			
8	Tiptur	225	147	65.3	162	72.0	193	85.8			
9	Tumkur	357	158	44.3	184	51.5	245	68.6			
10	Turuvekere	233	151	64.8	162	69.5	191	82.0			
Distri	ict	1400	54.2	1559	60.4	1966	76.1				

## Table7: Village wise Sex Ratio in Tumkur District (2011)

Source: Census ofIndia2011

According to 2001 census Tumkur district has 2582 villages, of which, 1400 villages(54.2%) have more than district average sex ratioi.e.,984,1559villages(60.4%) have more than state average sex ratio i.e., 973 and 1966 villages (76.1%) have more than national average sex ratio. During 2011 census Tukur district has better sex ratio than that of National and state average sex ratio. Among ten taluks of the district, Tiptur taluk has highest percentage of villages(82.3%), which have the sex ratio more than district average, as well as state and national average. Least number of villages in Sira taluk has the sex ratio more than district, state & national average.

#### Table8: Village wise Sex Ratio of SC & ST Population in Tumkur District(2001)

			Villages have the Second	ex Ratio a	above the average	
Sl.No	Taluk	Total Villages	SC Dist Avg = 966		ST Dist Avg = 962	
		_	Villages	%	Villages	%
1	Chikkanayakanahalli	221	96	53.9	78	59.1
2	Gubbi	328	130	56.8	96	57.5
3	Koratagere	236	92	49.7	78	51.7
4	Kunigal	294	170	66.7	34	46.6
5	Madhugiri	298	115	48.9	105	50.7
6	Pavagada	145	61	44.9	65	50.8
7	Sira	235	102	49.8	93	52
8	Tiptur	227	117	62.6	57	57
9	Tumkur	358	141	48	101	47.9
10	Turuvekere	232	118	61.5	49	61.2
District		2574	1142	54.5	756	52.9

Table 8 explains about the village wise sex ratio of SC & ST population at taluk level in Tumkur district. As per 2001 census, 1142 villages have more SC population sex ratio than district average Sex ratio and 756 villages have more ST Population sex ratio than district average sex ratio. Among all the taluks in Tumkur district more villages in

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Kunigal Taluk have more SC population sex ratio than district average, followed by Tiptur and Turuvekere taluks. More villages in Pavagada taluk have less SC population sex ratio compared to other taluks. Table also describes about ST population sex ratio. Out of 10 taluks Turuvekere taluk villages (61.2 %) have more ST population sex ratio followed by Chikkanayakanahalli & Gubbi Taluks. In Tumkur district more villages of Kunigal taluk have less ST population sex ratio than the district average and it is followed by Tumkur taluk villages.

			umber of Vill	ages have the	above the average	
Sl.No		Total Villages	SC Dist Avg	g =991		ST Dist Avg = 991
	Taluk		Villages	%	Villages	%
1	Chikkanayakanahalli	222	100	53.8	72	50.0
2	Gubbi	331	129	54.4	94	51.4
3	Koratagere	235	105	55.6	75	47.8
4	Kunigal	294	176	68.2	41	42.7
5	Madhugiri	302	107	45.7	107	50.0
6	Pavagada	149	74	53.2	72	54.1
7	Sira	234	98	47.8	87	47.0
8	Tiptur	225	118	63.4	66	58.9
9	Tumkur	357	134	45.6	110	47.8
10	Turuvekere	233	118	61.8	56	56.0
	District	2582	1159	54.7	780	50.2

#### Table.9: Village wise Sex Ratio of SC &ST Population inTumkur District (2011)

Source: Census of India2011

#### 6. CONCLUSION

According to 2011 census, out of 2582 villages, 1159 villages in Tumkur district have more SC population sex ratio than district average sex ratio and 780villages have more ST Population sex ratio than district average ST sex ratio in the district. Among the taluks in Tumkur district, Kunigal Taluk has more villages with more SC population sex ratio than the district average, followed by Tiptur and Turuvekere taluks. Pavagada taluk has more villages with less SC population sex ratio compared to other taluks. Table also describes the ST population sex ratio. Out of 10 taluks, Tiptur talukhas more villages (58.9 %) with more ST population sex ratio followed by Turuvekere & Gubbi Taluks. In the district, villages of Kunigal taluk have less ST population sex ratio than the district average. Nearly 50% villages in all the taluks of the district exhibits low Sex ratio. The reasons behind lower sex ratio are the similar which are prevailing in India. Special concentration is to be needed to uplift the sex ratio.

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