CHAPTER IV

CHANGES IN SEX RATIO

In the Indian Census, sex ratio is used to denote the number of females per thousand males. This ratio is an index of the socio-economic conditions prevailing in an area and is useful for regional analysis. It has a profound relation with demographic elements like growth of population, migration, marriage rate, work-force and employment pattern. Equally significant are the changes in the sex ratio, as these leave their imprint on the basic demographic factors. This chapter proposes to discuss the spatial variations in sex ratio and its temporal trends in the region.

SEX PATTERN OF THE REGION

A perusal of Table 4.1 reveals that in 1971 Inter-State Chandigarh Region had a sex ratio of 810 females per thousand males which is lower than that of the nearby states of Punjab (865), Haryana (867), Uttar Pradesh (879), Rajasthan (911), Himachal Pradesh (958) and (937) for the country as a whole. Hence the excessive deficiency of females is the outstanding feature of the sex composition of the region.


Table 4.1
INTER-STATE CHANDIGARH REGION
Sex Ratio: 1951-71*.

<table>
<thead>
<tr>
<th>Year</th>
<th>I.S.C.R.</th>
<th>Rural</th>
<th>Urban</th>
<th>Rural-Urban Differential</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951</td>
<td>836</td>
<td>839</td>
<td>802</td>
<td>-37</td>
</tr>
<tr>
<td>1961</td>
<td>788</td>
<td>823</td>
<td>690</td>
<td>-133</td>
</tr>
<tr>
<td>1971</td>
<td>810</td>
<td>825</td>
<td>781</td>
<td>-44</td>
</tr>
</tbody>
</table>

Source:  
i) District Census Handbooks of Ambala, Patiala and Kohistan, 1951.  

*Compiled and computed for the Inter-State Chandigarh Region.
A convincing and reasonable answer about this imbalance can be found through a study of a) the male selective movement into the region, b) differential rates of mortality of the two sexes at different ages and c) the sex ratio at birth.

The most significant factor contributing to the unequal distribution of the two sexes within the region is the male selective migration into the fast growing Inter-State Chandigarh Region. Most of the immigrants are from parent and adjoining states like Punjab, Haryana, Himachal Pradesh, Rajasthan and Delhi. These migrants are attracted by the multi-dimensional employment opportunities in view of the development of Chandigarh City and its vicinity. The total migrants in 1971 in the Union Territory of Chandigarh were 196,226: 57.1 per cent (112,092) males and 42.9 per cent (84,134) females*1, thus adding to the imbalance and producing appreciable contrasts in the sex structure of the region. In fact, the greater distortion in sex ratio is largely because of Chandigarh City which accounts for a large proportion (25.2 per cent) of the total population of the region and has a very low sex ratio of 752 females in 1971 and 625 females per thousand males in 1961.

Excluding Chandigarh from the scene, the region would have a

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sex ratio comparable to the figures of North-Western India.

The other reasons (besides male dominated immigration) for having fewer females than males in the micro I.S.C.R. are the same as in the parent macro region. Although infanticide is extremely rare now, neglect of female children and consequently their higher rate of mortality are commonly observed among the rural communities of north western India. Undoubtedly, a female child is looked upon with disfavour but the bias against her has always been greater in northern India due to the patriarchal form of society. For this reason, disappointment is expressed in most families on the birth of a daughter who is considered a burden, while the birth of a male child is a source of joy, entailing preferential treatment both for the mother and child. This disparity is followed by a different outlook in her care, nourishment and upbringing with the result that the mortality rate of females is high. The social practice of dowry is also responsible for prejudice against females. The inferior social status of women is traditional and they have little social freedom, low level of education, limited gainful employment and complete economic dependence upon males.

In urban areas of the region, there has been some improvement in the social status of women because of the high

literacy rate, better employment opportunities, and awareness of rights given by the Indian Constitution. Enactment of various laws of inheritance of property, marriage, divorce, voting, employment and guarantee of equal rights to all citizens irrespective of caste, creed and sex have followed. All these have improved the social status of women, though the age old subjugation to males is still common in north India, though less than before.

Another reason for the deficiency of females is the high rate of maternity deaths in the rural areas of north western India. This is due to premature cohabitation and child-bearing, the pre and post-natal disorders besides unskilled midwifery practices at the time of child birth, resulting in the death of either child or mother or both. Too many births, without proper intervals take a heavy toll.

Lastly, it can be said with a reasonable degree of certainty that the natural sex ratio*¹ has a dominance of males over females which is a biological phenomenon. This is also evident from the sex ratio of Ambala District which in 1961 and 1971 had 898 and 874 females respectively*².

Though there is no basis to support the biological factor,

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*¹. Natural Sex ratio is synonymous with secondary sex ratio (at the time of birth) which is different from primary sex ratio (at the time of conception) and tertiary sex ratio as obtaining.

such a trend has been observed in north-western India which is inhabited by the Aryans. This is contrast to south India inhabited by the Dravidians and characterized by high sex ratio at birth\textsuperscript{1}.

\textbf{TREND IN SEX RATIO:}

The non-availability of the data on total population of the region in the pre-1951 decades restricts the study of sex ratio to the post-Chandigarh period of 1951 to 1971. In 1951, the sex ratio prevalent in the Inter-State Chandigarh Region was 836 females to 1,000 males and all factors discussed above, except male selective immigration, were in operation. During 1951-61, the decline in the sex ratio of the region suddenly by 48 points was caused, among other factors, by the large-scale male selective immigration of workers from neighbouring states and transfer of the government and semi-government staff from Simla, Patiala and other places to the new capital of Chandigarh. In the initial years of the capital project, there was a dearth of accommodation, hence the government servants had no option but to leave behind their families at the place of their previous posting. Even the immigrants, who were not sure of their prospects, moved in without their families. The workers had an identity of their own. Their dialect or speech was different from that of the local populace. The quality of

\footnote{1. Gosal, G.S. 1961 Ibid. p.130.}
life in their case was poor—many especially rickshaw pullers living on the pavement, while labourers in shabby hutments. The arrival of male workers brought down the sex ratio accompanied by a striking fall in the female mortality rate. During 1961-71 there was an addition of 22 points in the sex ratio. This addition took place because of the movement of the families of the male workers on the availability of accommodation and further diminution of female mortality rate. The curve of the sex ratio, which became very low in 1961, showed an upward trend in 1971 and is bound to increase in the coming decades.

**RURAL URBAN DIFFERENTIAL IN SEX RATIO**

The sex ratio for 1971 in the rural areas was 825 females as compared to 781 females per thousand males in the urban areas, whereas in 1951 the rural urban sex ratio differential was much less, it being 839 and 802 respectively. Table 4.1 reveals that, rural sex ratio during the period 1951-71 has remained almost constant and less fluctuating than the urban sex ratio because the stream of immigrants was mainly towards the urban centre of Chandigarh. However, the disparity between the two (urban and rural) sex ratio was the maximum in 1961, being 133 points.

In the pre-Chandigarh period of 1951, the disparity of rural-urban sex ratio was only 37 points. It was less because in 1951, the urban population was very small and
did not effect the overall sex ratio. But during 1951-61, the decrease in sex ratio by 133 points and the rural-urban differential by 112 points is accounted for by the large-scale male-oriented migration towards Chandigarh. The wide scope of employment opportunities and higher wages, for the migrants of Punjab, Haryana, Rajasthan, Uttar Pradesh and other areas, were good incentives to shift. It is quite apt to quote Davis that male-dominated rural-urban migration is related to the economic basis of modern urbanization on the one hand and the Indian society's peculiar attitude towards female employment on the other. Naturally, employment opportunities in a newly and fast growing town like Chandigarh were manifold as in business, trade and communications, construction activity, other services etc., where males were mostly in demand. The strong prejudice against the employment of females outside the home and the high cost of living in cities discouraged them from accompanying their menfolk. To add to this factor is the Indian joint family system of the rural areas where families of the male migrants left behind are assured of safety and security by the elders of the family. In the case of migration within the rural parts of the region, whole families migrated from one place to the other while the movement from rural to urban places was initially male dominated. This brought about

\*1 Davis, K. 1951. The population of India and Pakistan. Princeton University Press, Princeton p.139-140

a sharp change in the sex ratio of the recipient urban areas during 1951-61. The movement of offices to Chandigarh forced the workers to move alone initially, thereby causing a sharp decline in the sex ratio. Similarly, the expansion of services, industries and trade, encouraged by government incentives and loans attracted male workers only. The construction work, which was at its peak in the nineteen fifties also attracted male labourers. All these factors greatly lowered the urban sex ratio of 1961 to 690 while the rural sex ratio of the region (823) did not undergo much change.

During 1961-71, there was a reversal of the earlier trend which was marked by a rise in the urban sex ratio by 91 points on account of:

i) Increased family migration against earlier male dominated movement:

Family migration increased with the completion of residential colonies of Chandigarh and other places. There was also a feeling of insecurity initially among the male migrants who, during this decade, on the feeling of security, brought their families from their native towns or earlier places of work.

ii) Further decrease in female mortality rate and increase in literacy rate:

The reasons for the drop in female mortality are the
availability of medical facilities, family planning and improvements in standards of living. Also, on account of sharp increase in literacy, there has been a distinct change in the employment pattern as more females are able to secure jobs. Besides, the strain of high cost of living has compelled many educated females to take up jobs. The result is that the educated females are competing with educated men for jobs.

iii) With improved transportation, there has been an increasing number of females migrants from the rural areas and smaller towns to Chandigarh for employment and education.

Thus, in 1961-71, there has been a significant rise in the urban sex ratio leading to narrowing down of the rural - urban disparity. The view of Davis*1 and Sen*2 that there is a strong inverse correlation between the size and sex ratio of urban settlements holds good when applied to the Inter-State Chandigarh Region.


The following study of the spatial pattern of sex ratio, showing the number of females per thousand males and the changes noticed therein, is based on what has emerged in Map Nos.4.1, 2, 3 & 4). There are three categories of

*1. Davis, K. 1951 Ibid. p.140.
areas on the basis of the average of 825 females per 1,000 males (Map 4.1).

i) Areas of low sex ratio of less than 800 females per thousand males.

ii) Areas of high sex ratio of more than 900 females.

iii) Areas of moderate sex ratio between 800-900 females.

Areas of low sex ratio of less than 800 females per thousand males account for 342 villages or 35.8 per cent of the total area of the region. This is confined to peripheral locations around towns, northern dissected plain and central section of the upland plain.

The peripheral villages around towns are of two types: 1) villages in the periphery of Chandigarh City within a radius of 8-10 kms; This includes a belt having a very low sex ratio of less than 700 females, which, on account of nearness to Chandigarh and cheaper accommodation, have played a decisive role in inducing male workers to migrate to these villages. There are enormous opportunities of employment in the nearby city of Chandigarh in government, semi-government offices, banks, educational centres, trade, transport, industry and construction work. Chandigarh, being the administrative centre for three State Governments, employed 62 per cent of its workers in other services in
Inter-State Chandigarh Region
SEX RATIO OF RURAL POPULATION
1971

INDEX
Number of Females per 1000 Males

- ABOVE 1000
- 900 to 1000
- 800 to 900
- 700 to 800
- BELOW 700
- X UNINHABITED VILLAGE
- U URBAN AREA
- DNA DATA NOT AVAILABLE

(Data by individual villages)
1971. Its sex ratio of 752 was the lowest among the towns of the region. Mani Majra with 817 females had the second lowest sex ratio in the region.

b) Villages situated in the vicinity of towns like Kharar, Kalka and Banur: For the above reasons, this category also is marked by a deficiency of females in the villages situated in their vicinity. Kharar, a market town, has two textile mills and a number of units engaged in the manufacture of agricultural implements. Being located on the main road, it is well connected with the surrounding villages and the capital. Kalka, a transport town, owes its existence to its location on the Ambala - Simla highway and has 57 per cent of its workers engaged in transport business. Quite close to Kalka is Pinjore which has the Hindustan Machine Tools factory. It has a sex ratio of 726 per thousand males. The rapid progress of urbanization has led to a rise in the prices of land at Chandigarh and aggravated the housing shortage besides raising the rent of houses available.

Similarly, other towns have their own problems of accommodation. Hence, low-paid employees, who could not find suitable accommodation, have no alternative but to live in villages within easy reach of Chandigarh, Kalka, Kharar and Mani Majra from where they commute daily to these towns. The Survey of 1968\(^1\) showed that 5,000 workers commuted daily to Chandigarh.

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most of them on bicycles, from places as far as 35 kms. The commuters zone extended to Hindpur, Morinda and Kurali. Most of the villages with low sex ratio have more than one fourth of their working population employed in non-agricultural activities of their neighbouring towns.

The northern dissected plain, especially the piedmont region of Kharar Tehsil, is rugged in topography but being close to the capital is a marked area of low sex ratio because many workers live in these villages as the cost of living is not so high.

The low sex ratio is also typical in pockets of villages in the north western and western section of the upland plain from where the educated young males have shifted to towns in pursuit of non-agricultural work.

Similarly, the reclaimed waste lands of the Ghaggar river have attracted more migrants into the area and the sex ratio has been reduced to a great extent.

**Areas of High Sex Ratio with More Than 900 Females for 1,000 Males:**

Four patches in the region account for 20.7 percent (198 villages) of the whole tract in this category. The high sex ratio is well marked in the villages constituting the south-eastern section of the region; southern portion of the upland plain; villages around Kalka city and isolated patches in the north-western section of the region.
The south-eastern section of the dissected plain comprises the Paraingarh Tehsil which has a high sex ratio of more than 900 females and offers a sharp contrast to the low sex ratio around Chandigarh. This area has meagre resources, and agriculture is the mainstay of the people with more than 70 per cent of the land under cultivation. Consequently, the high pressure of population has reduced the size of holdings, compelling many male workers to migrate to surrounding towns for non-agricultural activities leading to a high sex ratio.

The southern section of the upland plain, constituting Rajpura Tehsil, is an area of high sex ratio. In fact, this includes the villages situated along or near the main railway line and the Grand Trunk Road. On account of the easy availability of transport, there is considerable daily migration of male workers to the nearby towns in two directions - Rajpura and Ambala to the south, and towards north for Chandigarh. Since most of the commuters return by the evening, the sex ratio is not affected. The same reason applies to the linear pattern of high sex ratio of villages located along the roads connecting Raipur Pani with Paraingarh, Chandigarh with Kharar, Morinda and Kalka. The well-developed public transport and metalled roads facilitate daily commuting.
Some parts in the hilly areas of Naraingarh and Kalka Tehsils also have a high sex ratio which is attributed to the migration of male workers to the towns of Kalka, Chandigarh and Mani Majra for employment.

Scattered villages in the north-western part of the region area areas of high sex ratio with high proportion of Scheduled Caste population (Map 2.2). In other words, these villages have drawn a large number of Scheduled Caste migrants, who are in demand because intensive labour is needed. Improvement in the irrigation facilities and the outmigration of young educated males during 1951-71 created a demand for more agricultural labour which has been met with the scheduled Castes. "Scheduled Castes move en masse as they are more migratory than any other section of the population because once they move, they lose almost nothing in their source area except a mud house. Their chronic poverty and weakening of the jajmani ties are the two main factors motivating them to migrate to areas of more employment opportunities".

The moderate sex ratio ranging between 800-900 females includes 43.5 per cent of the inhabited (416) villages in the region.

It is observed in the remaining areas of north-western section, the central portion of the dissected and upland plain and

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the hilly area. The former has intensive agriculture, small land holdings, high literacy rate and high nutritional density. Therefore, the educated males have either moved to towns in search of jobs or gone to foreign countries with the result that there has been relatively slow growth of population ranging between 15 to 30 per cent in the rural population and the sex ratio is moderate. Besides, the fall in the female mortality on account of diffusion of better medical facilities has further lowered the sex ratio.

Similarly, the hilly area of southern Kalka and eastern section of Naraingarh Tehsil is marked by a moderate sex ratio of 800 - 900 females because this part has not been affected by the impact of urbanization and has neither f avoured emigration nor immigration of any type.

The above study on the spatial variations in the sex ratio reveals that the general deficiency of females in the Inter-State Chandigarh Region has been the result of male dominated migration into the city of Chandigarh, a high rate of female mortality, and a low sex ratio at birth in the region. The areas of low sex ratio are either concentrated around Chandigarh City and other towns or piedmont area of Kharar Tehsil and the dissected plain. The high sex ratio, on the other hand, is mostly confined to the south-eastern section of the region such as the Naraingarh area. Agriculture is the main source of the economy and
can sustain its inhabitants. The area south of Kalka has provision for residential accommodation for the workers of industrial units and their families and therefore it has high sex ratio.

**Changes in the Rural Sex Ratio, 1951-71.**

The above discussion throws some light on the varying degree of selective male migration into and out of the region as well as the movement of the people from one part to the other reflecting the spatial changes in the sex ratio of the Inter-State Chandigarh Region.

This change in the rural sex ratio of the region during 1951-71 was marginal - only 14 points. The region can be divided into two types of areas: a) areas with a drop in the sex ratio, b) areas with an increase in the sex ratio (Map 4.2). However, explanations can be better understood by studying the changes during the 1951-61 and 1961-71 decades separately (Maps 4.3 and 4.4).

**Areas where the sex ratio has dropped.**

During the span of two decades, 47.9 per cent of the area (446 villages) recorded a drop in the sex ratio ranging between 1 to 200 females per 1,000 males. The decline has been the highest in the villages on the periphery of Chandigarh though other towns like Kurali, Kharar, Morinda, Banur and Mani Majra have also undergone a drop in their sex ratios. This is due to the influx of non-agricultural workers.
Inter-State Chandigarh Region
CHANGE IN SEX RATIO OF RURAL POPULATION 1951-71

INDEX
Change in number of Females per 1000 Males
- ABOVE 150
- 100 to 150
- 50 to 100
- 0 to 50
- BELOW 0 (DECREASE)
- X UNINHABITED VILLAGE
- U URBAN AREA
- DNA DATA NOT AVAILABLE

(Data by Individual Villages)
Inter-State Chandigarh Region
CHANGE IN SEX RATIO OF
RURAL POPULATION
1951 - 61

INDEX
Change in number of
Females per 1000 Males

- Above 150
- 100 to 150
- 50 to 100
- 0 to 50
- Below 0 (DECREASE)
- X UNINHABITED VILLAGE
- U URBAN AREA
- DNA DATA NOT AVAILABLE

(Data by individual villages)

Map 43
Inter-State Chandigarh Region
CHANGE IN SEX RATIO OF
RURAL POPULATION
1961 - 71

INDEX
Change in the number of Females per 1000 Males

- ABOVE 150
- 100 to 150
- 50 to 100
- 0 to 50
- BELOW 0 (DECREASE)

X UNINHABITED VILLAGE
U URBAN AREA
D N A DATA NOT AVAILABLE

(Data by Individual Villages)
who work in towns but like to live in villages for several reasons. The second marked area of decline in the sex ratio is along the flood plain of rivers like Markanda, Ghaggar, Janta Devi-ki-Nadi, Budh-ki-Nadi and Tangri Nadi following reclamation of land and flood control measures which have attracted immigrants.

Areas with an increase in the sex ratio. There has been an increase in the sex ratio in 485 villages constituting 57.1 per cent of the area during the period of 20 years. Of this 150 villages recorded an increase of 1 to 50 females per thousand males while 131 villages underwent an increase of more than 150 females per 1,000 males. The former units being scattered all over the dissected and upland plain are associated with the migration of males to towns for employment. In Ropar and Fategarh Tehsils, the high literacy rate and small land-holdings have forced many educated males to migrate to towns. Villages having an increase of more than 150 females per thousand males are group together along the Chandigarh-Kalka road. However, the greater increase in the sex ratio occured during 1961-71 than in 1951-61.

CONCLUSIONS.

1. Before Chandigarh came into the picture, the sex ratio of the region was the same as for the north-western section of India. The coming up of
Chandigarh has greatly affected the sex ratio of the inter-state Chandigarh Region. Today, the region has a lower sex ratio than the neighbouring states of Punjab, Haryana, Himachal Pradesh, Uttar Pradesh Pradesh and the country as a whole because of its fast growth accompanied by male dominated immigration.

2. There is a striking contrast in the spatial distribution of sex ratio within the region. It is low in villages surrounding Chandigarh and other towns, in the floodplains of the rivers due to immigration of male workers. But the areas with a backward economy and poor resources such as the lower dissected plain and the hilly region have registered a high sex ratio on account of the outflow of male workers.

3. The rural sex ratio is higher than the urban sex ratio, which is similar to the pattern observed in Punjab and Haryana States. The low sex ratio of Chandigarh City is in sharp contrast to the average sex ratio of the region. This can be explained by the difference in the level of the economy. In the core, trade, industry, transportation, education, construction and other services have considerably expanded. These attracted males - the
migration of females or families being a subsequent phenomenon.

It is clear from the above that the disparity between male and female ratio has undergone a marked change during 1961-71 because of increased migration of families rather than just male migration as before; a drop in the female mortality rate; improvement in literacy and better nutrition and medical facilities. The social status of the females improved slowly but steadily yet equality between the male and female is still distant.