

# Regional Variations of Occupational Structure of the Labour Force of India, 1961

A country's occupational pattern generally gives a broad idea about the stage of economic development attained by that country. The proportion in which the working population is distributed among different categories of occupation tells us much about economic organisation of society and helps us to correlate this with other sectors of social life. An analysis of statistics on occupation of the working population is, therefore, desirable for the formulation of regional programme of economic development and also to describe or measure the achievements of economic and social programmes in the region. These statistics facilitate analysis of the interrelationship between the demographic situation and methods of earning livelihood.

The present study is an attempt to provide some insight into the occupational structure of labour force and its regional variations in India, using the 1961 Census data. The objectives of the study are:-

- (i) To determine the pattern of distribution of workers for all India as well as for the States.
- (ii) To compare the occupational structure of India with those of other countries.
- (iii) To measure the extent of occupational differentiation by sex.
- (vi) To measure the relative degree of unevenness in the distribution of

- a) each of the major occupational groups in relation to the distribution of the population and
- (b) each of the States in relation to the distribution by occupation for all-India and to explain the reasons for concentration.

### **Scope of the Study**

This study involves a cross-sectional analysis of the occupational structure of the Indian working force in 1961. There were 15 States and 12 Union Territories in India at the time of the 1961 Census but this study is restricted to States only. However, States cover 98.2 per cent of total population of the country. The study has been done for each sex separately as well as for both sexes combined. The variation in the occupational structure by age has not been studied in the paper since the occupational classification by age of workers is available only in four broad categories, and that too for urban areas only.

### **Availability and Adjustment of data**

It was in the 1961 census that economic data were for the first time tabulated separately under 'Industrial' and 'Occupational' classification, in respect of workers other than those engaged in cultivation. The occupational classification adopted in the Indian census is the international standard classification, except that it is restricted to persons at work other than cultivation. In other words, Group 3, recommended in the international classification, does not include cultivators and agricultural labourers. However, these two categories are tabulated separately under industrial classification. Therefore, in order to study the occupational pattern of all workers with respect to all occupations, these two categories, viz. (i) cultivators and (ii) agricultural labourers, were added in Group 3, as recommended in the international classification. After this, we reclassified the data in the occupational classification system developed by Population Studies Centre at the University of Pennsylvania (referred to as PSC). The PSC occupation classification system has the advantage over the international standard classification in that it distinguishes the traditional occupation from the modern one within broad occupational categories. Further, it is important to analyse the component groups, as in the process of socio-economic development they may experience markedly different changes. Also, such a scheme may be helpful in throwing some light on influences or social customs and conventions on the 'choice of occupation' in society such as that of India.

### **Occupational Pattern**

Table I provides the percentage distribution of workers by occupation groups for India as well as for States in 1961. India is predominantly agricultural and the occupational distribution of its labour force is similar to that of other agricultural countries. The occupational distribution of workers by States shows that agricultural workers are dominant in all the States except Kerala. This is true for both sexes as well as for males and females separately.

In Kerala State, a high proportion of the working force turns out to be engaged in non-agricultural activities. Thus, as a general rule one would expect high level of industrial development in Kerala. But the picture presented is quite different when one looks at the income contributed by different sectors. The major share (56.0 per cent) of output still originates in the primary sector (all-India=52.3 per cent). The secondary and tertiary sectors taken together contribute 44.0 per cent of the output against 47.7 per cent in the case of all-India.<sup>1</sup>

Thus while the sectoral distribution of employment seems indicative of diversified structure of economy, the sectoral distribution of income does not. Two factors seem to be responsible for this. In view of high density of population (average size of land holding in Kerala is 1.5 acres as against 7.5 acres for all-India), the possibilities of providing gainful employment in the agricultural sector are naturally limited. Superimposed upon this is the fact that as a result of predominance of perennial crops, especially coconuts, in the agricultural sector, the cropping pattern in Kerala is comparatively less labour intensive. As a result of the operation of these factors, a large section of the population appears to have been forced to turn to some sort of non-agricultural activity or the other. But this seems to be of a 'make-work' character.

Although the industrial sector of Kerala absorbs a high proportion of working force (22 per cent) as compared with all-India (10 per cent), a majority of these workers are engaged in very low productivity industries. The two major industries of Kerala, viz. coir and cashewnut are technologically very backward. The coir industry which is organised as a cottage industry (mostly located in rural areas), provides an occupation for about 10 per cent of the total working force and 40 per cent of the industrial working force. Cashewnut processing, although organised on the lines of factory industry, is almost entirely unmechanized. As a result, labour productivity in the secondary sector is extremely low. On the other hand, the primary sector in Kerala is comparatively better developed and labour productivity in the primary sector is roughly 50 per cent higher than at the all-India level. Agriculture in the State is characterized by a high value yielding cropping pattern, good physical yields, a high intensity of cropping and superior cultivation techniques. All these factors combine to make the agricultural sector of Kerala highly productive. The technology of the secondary sector is traditional and its productivity is even lower than that in the primary sector. This unusual picture in Kerala points to one of the strange paradoxes that occur in an underdeveloped economy.

Given the dominant proportion of agricultural workers in all States save Kerala, there are still significant variations among these States. The rank order of agriculture in the States varies depending on the structure of the economy, educational levels and social development of the State (Table 2).

Among the non-agricultural occupations, the notable feature of the Indian labour force is a relatively high proportion of the division 'Craftsmen, production process workers and labourers not elsewhere classified' in all the States. This is true both for males and females. The share of this group is greatly inflated due to inclusion of 'labourers not elsewhere classified' who formed a high percentage of workers in each State. For India as a whole, they formed about 34 per cent of workers. The proportion varies considerably by States. It varies from 21.7 per cent in Andhra Pradesh to 51.7 per cent in Orissa. In this connection it may be pointed out that the category "others and not reported" forms a very small proportion in each State, which is contrary to expectation. This probably indicates that most of the workers of this category have been included under "labourers not elsewhere classified".

Thus, we see that this is a very heterogenous division and it consists mainly of labourers and workers engaged in producing goods, rather than services, and of transporting persons and goods. One would, therefore, expect the proportion of the labour force occupied by this group to increase as the level of urbanization rises. This is generally so with males, but no such pattern exists for females. On the contrary, the proportion of females in this division seems to be inversely related to the level of urbanization. This is probably so because most activities carried out

by females under this division of occupations are typically rural. Such activities include weaving spinning, dyeing, pottery making, milling and food manufacturing etc.

Sales workers constitute the second major division of non-agricultural occupations in most of the States when both sexes or males are considered. Except for the sub-group of "all other sales workers", which consists largely of specialized occupations such as insurance, salesmen, stock brokers, real estate brokers etc., most of the sales workers seem to be engaged in less organized and more traditional sales activities. Although we do not observe a steady progression according to the level of urbanization, we generally find that the more urbanized States have higher proportions in this category than the less urbanized ones.

Apart from "sales workers" the other major division is of the "service workers" and this constitutes the second largest division of non-agricultural occupations in the case of female workers. The large number of workers in 'sales' and 'service' occupations may be the result of a phenomenon observed in some other countries with low standards of living; non-availability of jobs elsewhere may result in an increase in small, one man or family owned and operated retail selling enterprises, because these offer a relatively easy outlet for people with very small capital and working with family help<sup>2</sup>. This same phenomenon may account for the increasing importance of "domestic service workers," whose existence in large numbers may be perpetuated by the great inequality in income distribution. In the context of Mexico, Jaffe remarks:

Much of the increase in the so-called service and white-collar industries.....simply reflects the fact that the population of working force age has increased more rapidly than have the job opportunities in industries producing physical goods. This is implicit in the fact that so many of these services and white collar industries pay lower than average wages<sup>3</sup>.

The proportion in the category of "sales workers", in general, rises as expected with increasing level of urbanization in the case of males. The females do not show any consistent pattern. Perhaps, partly this can be explained by the fact that females are out-competed in the labour market by surplus male workers in the more urbanized areas and partly this may also be accounted due to the negative attitude of the community towards women's work outside the home.

The proportion of workers in "professional, technical, administrative occupations" is generally regarded as indicative of high-level manpower available to a country or State. One would, therefore, expect this proportion to rise as one moves from the least developed to the more developed parts of the country. We find this is generally so when we consider the level of development as measured jointly by levels of urbanization, literacy and average per worker income. The rank correlation between the proportion of workers in these categories and the level of development (as measured jointly by various socio-economic indices) work out to be 0.80 and 0.83 for males and females respectively.

Although, comparatively speaking, the different States are at varying stages in the matter of availability of high level manpower, indeed for none of them it is at a satisfactory level. In the "professional and related workers group" the largest single sub-group in each State is that of teachers. For all-India the teachers alone account for about 49 per cent of the total workers in the professional division. The percentage in this sub-group between the States varies from 42 to 57. Among the States, both male and female teachers seem to be distributed

according to the level of urbanization, with the exception that Kerala State has a relatively higher proportion of teachers than would have been expected from its position on the scale of urbanization. Probably this can be explained by a substantial expansion in the education sector both in rural and urban areas during 1951-61. For example, the number of students in schools increased by more than double between 1951-61.<sup>4</sup> Although the number of teachers was not probably doubled, yet their number must have increased significantly.

The proportion in the sub-category "architects, engineers and surveyors," generally regarded as an important factor in economic development, clearly shows that none of the States is at a satisfactory level.

Thus, we see that not only are the agricultural workers dominant in India but the quality of the non-agricultural labour force is also very low, with larger proportions of craftsmen and labourers, sales workers, and domestic service workers and very low proportions in the white-collar occupations of "administrators, executives, managers and related workers."

#### Occupational Differentiation by Sex

Occupational differentiation by sex refers to empirical differences in the occupational composition of male and female labour force. This may be closely related to community attitudes towards women's work. An index, as explained in Appendix 1, has been computed to measure the occupational differentiation by sex with mathematical control on both the occupational structure and the sex composition of the labour force in the State. Table 3 provides the values of the index by States and occupational groups. The index reveals some interesting results, which are summarized below:

- (1) The occupational categories of "farmers, fishermen etc." and "craftsmen, production process workers etc." are those in which females are over-represented in almost all States. Within the category of "craftsmen, production process workers," the preponderance of females, is almost apparent in the occupational group "spinners, weavers, tailors, cutters etc.," while males predominate in the occupational groups of "carpenters, painters, bricklayers and related workers" "metal workers" and transportation.
- (2) Another group in which females are relatively over-represented is the category of "service, sports and recreation workers," in eight out of 15 States, namely, Andhra Pradesh, Gujarat, Kerala, Maharashtra, Punjab, Rajasthan, Uttar Pradesh and West Bengal, females are over-represented in this category. Within this category, the preponderance of females is most apparent in the two groups of "housekeepers, cooks, maids and related workers" and "building caretakers, cleaners and related workers"
- (3) For professional workers, the value of the index is below 1.0 in four States (Gujarat, Maharashtra, Punjab and West Bengal). This indicates that males are under-represented in the category of professional workers in these four States. But within this category, males are over-represented among architects, engineers, surveyors, physicians, dentists and lawyers, while females predominate in the occupations of teachers and nurses. Incidentally, it may be pointed out that these are the four States which are relatively more industrialized and developed than the other States. Thus, these findings

have an important implication : socio-economic development of the country or State may lead to over-representation of females in certain selected professional occupations.

- (4) In all the remaining occupational categories (administration, executive, managerial, clerical and sales workers) females are relatively under-represented,
- (5) Among the States, Punjab had the largest occupational differentiation by sex, which may be due to its negative attitude towards women's work outside the home. The rank order patterns of the overall occupational differentiation by sex of the States are as follows :—

A. States showing occupational differentiation by sex above the national average : Punjab, Uttar Pradesh, Gujarat, Andhra Pradesh, West Bengal, Karala, Raj as than Maharashtra and Madars.

B. States showing occupational differentiation by sex below the national average : Madhya Pradesh, Jammu-Kashmir, Assam, Mysore, Bihar and Orissa.

The above findings show that there is a large occupational differentiation by sex and this reflects the limitations imposed by society on the choice of the work available to women.

#### **International Comparison of the Occupational Structure.**

An international comparison of occupational composition may be facilitated by groupings together occupational groups into four major categories, namely, "white-collar workers," "agricultural workers," "manual workers," and "service workers." According to Jaffe and Stewart, the proportion of white collar workers among the total male workers is an "index of economic system and technological development."<sup>5</sup> Conversely, the percentage of agricultural workers among the total male workers is considered to represent the degree of economic under-development.

A comparison of the occupational structure of India with that of other countries (Table 4) clearly shows the position of India in this respect. The percentage of white collar workers among the total male workers for India (10.6) is compared with the corresponding total of 32.8 percent for the United States and 29.3 per cent for Japan in 1960. On the other hand, 68.6 is the percentage of agricultural workers among the total male workers in India as compared with the corresponding score of 8.2 and 25.6 for the U.S.A. and Japan respectively. Large difference are seen also in the share of manual workers.

Furthermore, comparative analysis the relation between occupational structure and the degree of urbanization reveals that there is a general pattern, showing that as the degree of urbanization increases, the percentage of agricultural workers decreases. Again a wide variation is observed between the occupational pattern of industrializing and industrialized nations. For the latter group of countries the proportion of professional and technical workers is roughly five times or more than that of the less developed countries such as, for example, India (1.7 per cent), Thailand (1.3 per cent) and Pakistan (1.4 per cent). The other important variations, apart from agriculture working force, relate to the occupational categories of managerial, administrative and clerical workers.

Such international comparisons show that, economically speaking, India has a very long way to go but she is almost on par with Pakistan, her neighbour geographically, and with many other countries of the ECAFE region.

### Regional Share of Population and Occupations

In this section an attempt is made to measure the relative degree of uneven distribution of (i) each of the major occupational groups in relation to the distribution of general Population and (ii) each of the States in relation to distribution of all-India by occupation as base.

In the first case the index adopted to measure the unevenness of the distribution is termed as "concentration index." The formula for computing the concentration index is as follows:-

$$C = \frac{1}{2} \sum_{i=1}^k |x_i - y_i|$$

Where  $X_i$  and  $Y_i$  represent the percentage distribution of workers and population in a State. In his measure of concentration, if each occupational group of the working force is distributed in the same percentage as the population in each State, then the index becomes zero in each group.

Table 5 reveals some interesting results in respect of the pattern of distribution of workers by major occupational groups and sex.

- (1) Generally, female workers, classified by occupational group, are more concentrated than males. In all occupational groups, except "miners, quarrymen and related workers," the index of concentration for females is larger than that for males, and in most cases, the index for females is more than, or nearly double, that for males. Again, by looking at Table 5, for females, we find that some occupational groups show surprisingly heavy concentration in certain States. Maharashtra, for example, accounts for 29.9 per cent of the total female clerical workers in India, whereas the general population comprises only 9.0 per cent of the total female population. For another example, Andhra Pradesh accounts for 26.4 per cent of the total female sales workers, although population comprises only 8.4 per cent of the total female population. This supports our earlier finding that the economic opportunities available to females are much more susceptible to State differences.
- (2) The degree of concentration varies considerably from one occupational group to another. For both males and females, the highest concentration score is found in the occupational group "miners, quarrymen and related workers" This particular tendency of concentration in India reflects the concentration of mines and quarries in Bihar and Madhya Pradesh States.
- (3) Both for males and females, the lowest concentration score is found in the occupational group "farmers and fishermen etc." This reflects that this occupational group is distributed more or less in the same percentage as the general population in most of the States in India.
- (4) In general, there is tendency for typical urban types of occupations, such as managerial and clerical workers, to be more concentrated than other types of work.

If we compare the occupational structure of each State with that of all-India (Table 6), we find the highest concentration score in Kerala, followed by West Bengal, irrespective of sex. The higher concentration score in these States reveals that a much higher proportion of the working force is engaged in non-agricultural Activity in these States as compared to all-India.

Again when we compare the occupational structure in broad occupational groups for each State with that of all-India, we find that six States (West Bengal, Kerala, Punjab, Maharashtra, Madras and Gujarat) have a higher percentage of workers in the occupational groups "white collar" "manual" and "service workers" than for all-India. It may be worthwhile to mention that these are the six States which have a higher average per worker income, literacy rate and per cent urban (except Kerala) than the all-India averages. These finding shows that with the economic development of the State, the proportion of the labour force in white-collar, manual and service occupations may increase and the proportion in agricultural occupations may decrease.

### **Conclusions**

India is predominantly an agricultural country. As in most of the other ECAFE countries, agricultural workers are dominant and this pattern of engagement is found all over India except Kerala State. Not only are the agricultural workers dominant in India but the quality of non-agricultural labour force is also very low, with larger proportions of craftsmen and labourers and sales workers and very low proportions in the white-collar occupations such as administrators, executives, managers and related workers.

Females are relatively over-represented in the traditional occupations and in those in which the typical enterprise is the household or small-scale industry rather than in the more modern ones and in larger enterprises. However, with economic development, the demand for female teachers, doctors and nurses is becoming increasingly important.

Generally, female workers are more concentrated than males in all the occupational groups. This is mainly because the economic opportunities available to females are much more susceptible to state differences.

A reduction in the relative size of agricultural workers, both for males and females, is expected during the course of economic development.

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## APPENDIX 1

### Measurement of Occupational Differentiation By Sex

The index suggested by Martin and Poston<sup>6</sup> is adopted to measure the occupational differentiation by sex. This index provides controls on both the occupational structure and sex composition of the working force in the State. Such a standardization by sex is accomplished by making the female working force equal to the male working force and then distributing this number throughout the 10 female occupational categories according to the proportion observed in each female occupational category. Thus each standardized female occupational category ( $SF_i$ ) equals its proportion multiplied by the total of the male occupational frequencies

$$\frac{n}{(\sum_{i=1}^n M_i)} \quad \text{or} \quad SF_i = \left( \frac{F_i}{\sum_{i=1}^n F_i} \right) \cdot \sum_{i=1}^n M_i$$

where  $SF_i$  is the standardized female frequency in the  $i$ th of  $n$  occupational categories.  $F_j$  is the actual number of females in the  $j$ 'th of  $n$  occupational categories

The standardized ratio of actual to expected males ( $SR_i$ ) has been calculated by the following formula :

$$SR_i = M_i / (M_i + SF_i) \cdot 5 \quad \text{or}$$

$$SR_i = M_i / SE_i$$

where  $SE_i$  is the standardized expected number of males in the  $i$ th of  $n$  occupational categories.

If males and females were distributed equally in all the occupational categories, all the  $SR_i$ 's would be 1.00. There would be no variation among the  $SR_i$ 's. In contrast, the greater the departure of the actual from expected figures, the greater the variation in the size of computed  $SR_i$ 's. Thus the dispersion of  $SR_i$ 's suggests itself as a key factor in a measure of differentiation.

To make the dispersion score of one State comparable with that of another, the coefficient of relative variation has been worked out for each State. Thus, higher the coefficient of relative variation, the greater the relative dispersion of the  $SR_i$ 's in that State and consequently the occupational differentiation by sex in that State, and vice versa.

**Table-1**  
**Percentage Distribution of Workers by Occupational Groups and States—19 61**  
 (Both Sexes)

<i>Occupation Group</i>	<i>India</i>	<i>Andhra Pradesh</i>	<i>Assam</i>	<i>Bihar</i>	<i>Gujarat</i>	<i>Jammu &amp; Kashmir</i>	<i>Kerala</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>
Total	10.0.00	10.0.00	10.0.00	10.0.00	10.0.00	10.0.00	10.0.00
Profets. Tech. & related	1.72	1.40	1.47	1.28	1.90	1.21	3.86
Architects, Engineers & Surveyors.	0.08	0.06	0.06	0.08	0.08	0.06	0.12
Physicians, dentists, nurses & other medical workers	0.30	0.29	0.27	0.28	0.25	0.25	0.60
Teachers	0.84	0.70	0.85	0.60	1.00	0.57	2.20
All other	0.50	0.34	0.29	0.32	0.58	0.33	0.95
Admns., executives, and managerial workers	0.96	0.85	0.49	0.37	0.74	0.89	2.14
Clerical workers	1.95	1.47	1.43	1.20	2.35	1.89	2.23
Sales workers	3.64	3.97/	3.45	2.64	4.43	2.03	5.13
Working proprietors wholesale & retail trade.	2.49	3.45	2.10	1.89	2.87	1.73	3.49
Street vendors, canvassers, and news vendors	0.42	0.21	0.05	0.43	0.49	0.10	0.66
All other	0.71	0.31	1.30	0.33	1.08	0.21	0.98
Farmers, fishermen, etc.	7.2.92	7.3.60	7.8.01	7.9.71	7.1.84	8.0.61	4.6.94
Craftsmen, prod, process. & laborers n.e.c.	1.5.62	1.4.47	1.2.38	1.2.30	1.6.11	1.0.75	3.4.77
Spinners., weavers, tailors, cutters, etc.	3.65	4.76	5.42	1.77	4.59	4.15	7.03
Model workers	1.44	1.30	0.58	1.00	1.41	0.59	1.63
Carpenters, painters bricklayers & related	1.38	1.56	0.93	0.79	1.40	0.79	2.99
Transportation workers	0.74	0.67	0.82	0.54	1.04	0.58	1.26
All other	8.41	6.45	4.63	8.20	7.67	4.63	2.1.86
Science sport & recreation workers	2.96	4.18	2.14	2.25	2.54	2.57	4.77
Firefighters, policemen, guards and related.	0.57	0.40	0.69	0.46	0.72	0.80	0.48
Housekeepers, cooks, maids & related	0.81	0.56	0.93	N	0.51	0.80	2.68
All other	1.58	3.22	0.52	1.79	1.82	0.97	1.61
Not adequately described	0.22	0.04	0.62	0.25	0.08	0.05	0.16

Madhya Pradesh	Madras	Maharashtra	Mysore	Orissa	Punjab	Rajasthan	Uttar Pradesh	West Bengal
9	10	11	12	13	14	15	16	17
1.00.00	1.00.00	1.00.00	1.00.00	1.00.00	1.00.00	1.00.00	1.00.00	1.00.00
1.23 0.06	1.95 0.07	1.94 0.12	1.59 0.09	1.34 0.07	2.81 0.01	1.36 0.06	1.32 0.03	2.89 0.20
0.19	0.31	0.30	0.22	0.18	0.51	0.24	0.23	0.59
0.64 0.35 0.56	1.00 0.57 1.29	0.90 0.62 1.17	0.86 0.42 1.05	0.65 0.43 0.38	1.02 0.67 2.42	0.63 0.43 0.54	0.63 0.43 0.79	1.20 0.91 1.07
1.11 2.08 1.49	2.29 4.02 0.09	3.03 3.68 1.87	1.73 3.31 1.97	1.01 1.92 1.46	2.01 4.99 3.68	1.37 2.88 2.32	1.35 3.47 2.50	4.29 6.63 4.13
0.30	0.44	0.55	0.43	0.24	0.59	1.12	0.57	0.58
0.30 8.1.86 1.1.45	3.49 6.3.57 2.3.48	1.27 7.2.21 1.4.84	0.91 7.4.95 1.5.04	0.23 7.6.20 1.6.00	0.72 6.6.70 1.7.88	0.44 8.1.91 9.80	0.40 7.6.95 1.2.88	1.92 5.7.64 2.1.78
1.68	6.01	3.96	3.40	2.40	4.31	2.33	2.92	4.15
1.05 0.87	1.73 - 1.87	1.74 1.64	1.43 2.18	0.96 0.59	2.34 2.03	0.94 1.23	1.23 0.94	3.36 1.60
0.51 7.33 1.69	0.75 1.3.12 3.38	0.77 6.72 3.09	0.53 7.50 2.24	0.36 1.1.69 1.99	1.00 8.20 3.51	0.44 4.85 1.85	0.70 7.10 2.78	1.37 1.1.30 4.92
0.52	0.44	0.63	0.38	0.37	0.88	0.62	0.45	1.16
0.33	0.85	1.02	0.69	0.61	0.51	0.30	0.39	2.43
0.84 0.03	2.09 0.03	1.44 0.03	1.17 0.08	1.01 1.15	2.12 0.19	0.94 0.27	1.93 0.25	1.33 0.76

**Table I (contd.)**

**Percentage Distribution of workers by occupational groups and States—1961  
(MALES)**

Occupation group	India	Andhra Pradesh	Assam	Bihar	Gujarat	Jammu & Kashmir	Kerala
1	2	4	3	5	6	7	8
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Profes. Tech. & related	2.11	1.94	1.91	1.72	2.35	1.45	3.96
Architects, Engineers	0.12	0.10	0.08	0.12	0.12	0.08	0.17
Surveyors.							
Physicians, dentists, nurses	0.33	0.36	0.32	0.32	0.28	0.28	0.66
& other medical workers							
Teachers	0.98	0.95	1.09	0.82	1.13	0.64	1.92
All other	0.68	0.53	0.42	0.45	0.81	0.45	1.22
Admns., executives, and	1.36	1.33	0.72	0.52	1.08	1.24	2.94
managerial workers							
Clerical workers	2.74	2.38	2.08	1.75	3.43	2.28	3.01
Sales workers	4.68	4.74	4.90	3.35	6.10	2.78	6.79
Working Proprietors	3.20	4.00	2.96	2.42	4.02	2.36	4.64
wholesale & retail trade.							
Street vendors, canvassers,	0.51	0.24	0.07	0.49	0.58	0.13	0.77
and news vendors							
All other	0.99	0.50	1.87	0.44	1.51	0.28	1.38
Farmers, fishermen, etc.	6.8.62	6.9.95	7.6.59	7.6.77	6.4.59	7.6.94	4.5.97
Craftsmen, prod, process.	1.6.90	1.5.39	1.0.17	1.2.95	1.9.59	1.1.58	3.3.23
& laborers n.e.c.							
Spinners, weavers, tailors	3.44	4.45	0.99	1.30	5.71	2.86	3.76
cutter, etc.							
Matal workers	2.05	1.67	0.87	1.43	2.08	0.81	2.23
Carpenters, painters	1.87	2.29	1.38	1.14	1.93	1.08	4.19
bricklayers & related							
Transportation workers	1.07	1.10	1.23	0.80	1.52	0.74	1.78
All other	8.47	5.88	5.69	8.28	8.36	6.09	2.1.26
Service sport &	3.24	4.20	2.82	2.60	3.17	3.36	3.89
recreation workers							
Firefighters, policemen,	0.82	0.66	1.03	0.68	1.08	1.11	0.68
guards and related.							
Housekeepers, cooks, maids,	0.77	0.51	1.07	0.01	0.41	0.97	1.80
& related							
All other	1.65	3.03	0.72	1.92	1.69	1.29	1.41
Not adequately described.	0.29	0.05	0.81	0.34	0.10	0.07	0.21

Madhya Pradesh	Madras	Maharashtra	Mysore	Orissa	Punjab	Rajasthan	Uttar Pradesh	West Bengal
9	10	11	12	13	14	15	16	17
10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
1.80	2.28	2.60	2.04	1.80	2.35	1.85	1.48	2.92
0.10	0.11	0.19	0.13	0.11	0.13	0.09	0.04	0.23
0.21	0.32	0.34	0.25	0.22	0.48	0.28	0.23	0.52
0.93	1.02	1.13	1.06	0.89	0.95	0.87	0.70	1.19
0.56	0.82	0.94	0.60	0.59	0.80	0.61	0.51	0.98
0.93	1.87	1.85	1.55	0.53	2.95	0.82	1.27	1.22
1.84	3.40	4.67	2.56	1.39	2.45	2.08	1.72	4.84
3.03	5.30	5.32	4.17	2.10	6.07	4.25	4.18	7.29
2.19	0.13	2.70	2.53	1.57	4.48	3.45	3.00	4.49
0.38	0.47	0.70	0.39	0.23	0.71	0.16	0.67	0.65
0.46	4.70	1.92	1.24	0.31	0.88	0.64	0.50	2.16
7.677	5.9.63	6.1.98	7.0.77	7.7.46	6.3.08	7.6.74	7.4.42	5.6.20
1.341	2.3.66	1.9.49	1.6.10	1.3.37	1.9.63	1.1.61	1.3.93	2.2.11
2.15	5.82	5.13	3.31	1.95	4.01	2.34	2.84	4.04
1.61	2.63	2.76	2.13	1.19	2.85	1.40	1.55	3.84
1.33	2.38	2.40	2.86	0.81	2.45	1.77	1.19	1.60
0.84	1.13	1.25	0.81	0.51	1.22	0.68	0.90	1.58
7.47	1.1.69	7.96	7.00	8.89	9.10	5.42	7.46	1.1.04
2.19	3.81	4.03	2.70	2.09	3.24	2.30	2.70	4.61
0.86	0.66	1.02	0.57	0.53	1.08	0.94	0.58	1.34
0.32	0.76	1.00	0.70	0.67	0.53	0.33	0.36	1.88
1.00	2.39	2.01	1.43	0.88	1.64	1.03	0.77	1.39
0.04	0.05	0.05	0.11	1.26	0.22	0.30	0.30	0.81

**Table 1 (Contd.)**

**Percentage Distribution of workers by occupational group and States — 1961**  
(Females)

Occupation group	India	Andhra Pradesh	Assam	Bihar	Gujarat	Jammu & Kashmir	Kerala
1	2	3	4	5	6	7	8
Total	1.00.00	1.00.00	1.00.00	1.00.00	1.00.00	1.00.00	1.00.00
Profes. Tech. & related	0.87	0.57	0.59	0.39	1.00	0.59	3.62
Architects, Engineers & Surveyors	N	N	N	N	N	N	N
Physicians, dentists, nurses & other medical workers	0.24	0.17	0.18	0.19	0.17	0.16	0.46
Teachers	0.53	0.33	0.37	0.16	0.73	0.41	2.85
All other	0.10	0.07	0.04	0.04	0.09	0.02	0.31
Admns., executives, and managerial workers	0.08	0.12	0.03	0.06	0.05	0.01	0.28
Clerical workers	0.22	0.08	0.14	0.06	0.17	0.11	0.41
Sales workers	1.30	2.78	0.55	1.17	1.02	0.13	1.26
Working proprietors wholesale & retail trade.	0.94	2.59	0.38	0.79	0.54	0.10	0.79
Street vendors, canvassers, and news vendors	0.25	0.16	0.01	0.30	0.30	0.02	0.42
All other	0.12	0.03	0.17	0.08	0.17	N	0.05
Farmers, fishermen, etc.	8.2.28	7.9.20	8.0.84	8.5.78	8.6.61	9.0.03	4.9.20
Craftsmen, prod, process. & laborers n.e.c.	1.2.85	1.3.07	1.6.81	1.0.96	9.01	8.59	3.8.38
Spinners, weavers, tailors Cutters, etc.	4.12	5.24	1.4.28	2.75	2.31	7.47	14.71
Motal workers	0.12	0.05	0.01	0.10	0.05	N	0.21
Carpenters, painters bricklayers & related	0.31	0.45	0.03	0.08	0.34	0.04	0.19
Transportation workers	0.01	N	0.01	N	0.05	0.17	0.02
All other	8.28	7.33	2.49	8.03	6.27	0.90	2.3.26
Service sport and & recreation workers	2.35	4.15	0.77	1.51	1.26	0.53	6.82
Firelighters, policemen, guards and related.	0.01	0.01	N	N	N	N	00.1
Housekeepers, cooks, maids, & related	0.91	0.64	0.65	N	0.72	0.37	4.74
All other	1.43	3.51	0.12	1.51	0.53	0.16	2.08
Not adequately described.	0.09	0.13	0.26	0.06	0.06	0.01	0.03

Madhya Pradesh	Madras	Maharashtra	Mysore	Orissa	Punjab	Rajasthan	Uttar Pradesh	West Bengal
9	10	11	12	14	15	16	17	18
1.00.00	1.00.00	1.00.00	1.00.00	1.00.00	1.00.00	1.00.00	1.00.00	1.00.00
0.41	1.31	0.89	0.73	0.30	2.13	0.50	0.76	2.74
N	N	N	N	N	N	N	N	0.01
0.15	0.28	0.23	0.18	0.10	0.65	0.18	0.23	1.03
0.21	0.95	0.54	0.47	0.12	1.36	0.21	0.39	1.29
0.05	0.09	0.12	0.08	0.09	0.12	0.12	0.14	0.41
0.02	0.17	0.08	0.10	0.04	0.10	0.03	0.05	0.13
0.06	0.15	0.41	0.17	0.15	0.11	0.12	0.07	0.68
0.71	1.56	1.05	1.67	1.51	0.33	0.43	0.07	1.85
0.48	N	0.54	0.90	1.21	0.24	0.30	0.72	1.15
0.17	0.39	0.29	0.50	0.25	0.06	0.05	0.20	0.15
0.06	1.17	0.22	0.27	0.05	0.03	0.07	0.06	0.32
8.9.17	7.1.13	8.8.58	8.2.90	7.3.33	8.2.28	9.1.15	8.5.85	6.7.03
8.64	2.3.13	7.40	1.3.03	2.2.01	1.0.35	6.56	9.19	1.9.67
1.01	6.37	2.10	3.58	3.42	5.62	2.33	3.19	4.86
0.25	N	0.11	0.11	2.43	0.17	0.13	0.10	0.26
0.22	0.89	0.44	0.89	0.08	0.21	0.27	0.07	1.54
0.03	0.01	0.01	0.01	N	0.02	0.01	0.01	0.02
7.12	1.5.86	4.73	8.45	1.8.07	4.35	3.82	5.82	1.2.99
0.97	2.53	1.59	1.37	1.76	4.64	1.09	3.04	6.97
0.02	N	0.01	N	N	0.01	0.06	0.01	0.04
0.35	1.03	1.04	0.69	0.47	0.45	0.25	0.51	6.03
0.60	1.50	0.55	0.67	1.29	4.18	0.78	2.53	0.91
0.03	0.01	0.01	0.03	0.09	0.15	0.12	0.06	0.46

Table 2 : Percentage of Agriculture workers And values of socio-Economic indicators by States

States	Percentage of Agricultural Workers 1961	Percentage of of Urban Population 1961	Percentage of literate Population 1961	Per capita Income at 1960-61 prices
Andhra Pradesh	73.6	17.4	24.6	287
Assam	78.0	7.7	33.0	333
Bihar	79.7	8.4	21.7	221
Gujarat	71.8	25.8	36.2	393
Jammu & Kashmir	80.6	16.6	13.0	289
Kerala	46.9	15.1	55.1	315
Madhya Pradesh	81.9	14.3	20.5	285
Madras	63.6	26.7	36.4	334
Maharashtra	72.2	28.2	35.1	468
Mysore	75.0	22.3	29.8	305
Orissa	76.2	6.3	25.2	276
Punjab	66.7	20.1	28.8	451
Rajasthan	81.9	16.3	18.1	267
Uttar pradesh	76.9	12.9	20.7	297
West Bengal	57.6	24.6	34.5	465

Source : Asish Bose. *Pattern of Population Change in India, 1951-61*  
(Bombay : Allied Publishers, 1967)

**Table 3 : Value of the index for occupational differentiation, by State and occupations**

State	Profes.& tech.	Admin. & manag.	Clerical	Sales	Farmers	Miners	Transp. & comm.	Craftsmen , prod, process	Services	Coeff. of relative variation
All India	1.15	1.81	1.80	1.34	0.91	1.06	1.93	0.82	0.88	3.153
Andhra Pradesh	1.40	1.76	1.90	1.09	0.94	0.87	1.97	0.86	0.82	3.410
Assam	1.46	1.92	1.83	1.76	0.97	1.92	1.98	0.60	1.51	2.903
Bihar	1.46	1.67	1.89	1.28	0.94	1.34	1.97	0.77	1.03	2.846
Gujarat	0.94	1.77	1.75	1.39	0.85	0.76	1.85	0.81	0.97	3.495
Jammu & Kashmir	1.03	1.97	1.80	1.81	0.92	2.00	1.45	0.72	1.47	3.013
Kerala	1.01	1.82	1.73	1.67	0.97	1.86	1.95	0.87	0.70	3.257
Madhya Pradesh	1.34	1.90	1.86	1.33	0.92	1.03	1.89	0.80	1.03	3.059
Madras	1.11	1.78	1.88	1.42	0.91	1.00	1.96	0.82	1.04	3.181
Maharashtra	0.93	1.76	1.54	1.21	0.82	0.73	1.85	0.85	0.86	3.203
Mysore	1.24	1.80	1.79	1.19	0.92	1.23	1.94	0.81	1.07	2.857
Orissa	1.76	1.89	1.86	1.26	1.03	1.04	1.89	0.82	1.18	2.836
Punjab	0.55	1.87	1.82	1.80	0.87	1.31	1.92	0.92	0.50	3.664
Rajasthan	1.16	1.81	1.70	1.58	0.91	0.95	1.92	0.77	0.89	3.230
Uttar Pradesh	1.04	1.86	1.85	1.41	0.92	1.04	1.96	0.88	0.66	3.565
West Bengal	0.89	1.75	1.70	1.41	0.91	1.08	1.86	0.88	0.67	3.387

**Table 4 : Occupational characteristics of male Economically active Population and some demographic characteristics of Population for selected countries of World.**

Country	Year	Percent of white collar workers	Percent of agri-workers	Percent of manual workers	Percent of service workers	Percent of urban Population
<b>Africa</b>						
	Ghana 1960	10.1	58.7	22.4	2.3	23.1
	Mauritius 1962	16.7	37.3	40.0	5.5	46.5
	Morocco 1960	11.2	59.0	14.5	5.2	29.3
	U.A.R. 1960	15.5	54.7	19.7	8.4	37.8
<b>America</b>						
	Barbados 1960	15.3	22.8	46.5	8.9	40.3
	Canada 1961	26.0	23.1	43.1	4.5	69.6
	Costa Rica 1963	16.0	55.5	19.5	3.5	34.5
	El Salvador 1961	7.5	71.0	17.6	2.4	38.5
	Puerto Rica 1960	24.7	28.2	36.2	6.7	44.2
	Trinidad& Tobago 1960	20.4	21.2	44.4	8.7	17.5
	United States 1960	32.8	8.2	44.6	6.2	69.9
	Ecuador 1962	10.9	62.0	19.8	2.7	36.0
	Peru 1961	14.2	54.0	21.9	4.6	47.4
	Venezuela 1961	20.9	28.2	28.8	5.0	67.4
<b>Asia</b>						
	India 1961	10.6	68.6	17.2	3.2	18.0
	Iran 1956	10.8	56.9	20.6	6.3	31.4
	Israel 1961	31.7	14.3	37.8	6.5	77.9
	Japan 1660	29.3	25.6	40.0	4.3	63.5
	Korea 1961	14.6	60.0	14.8	3.2	28.0
	Sarawak 1960	10.9	74.0	12.5	2.6	15.0
	Thailand 1960	8.4	78.0	9.8	2.1	18.2
	Turkey 1960	10.4	60.9	18.1	4.6	31.9
	Pakistan 1961	8.8	73.5	13.0	3.3	13.1
<b>Europe</b>						
	Denmark 1960	21.7	23.2	46.7	3.5	74.1
	Sweden 1960	25.2	17.6	52.8	3.4	72.8
<b>Oceania</b>						
	New Zealand 1961	28.3	18.0	48.7	3.4	63.6

Source: Compendium of Social Statistics : 1967

**Table 5 : State-wise distribution of working Population by major Occupational groups and indices of concentration, India—1961 : Males**

State	Population	Profes. & tech.	Admin. & manag.	Clerical	Sales	Farmers	Miners	Tiansp.& comm.	Craftsmen prod, process	Services
All India	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Andhra Pradesh	8.0	8.0	8.5	7.5	8.9	8.9	8.1	8.6	7.9	11.3
Assam	2.8	2.4	1.4	1.9	2.7	3.0	1.6	3.0	1.5	2.3
Bihar	10.3	8.2	3.8	6.2	7.1	11.2	32.7	37.5	7.0	8.0
Gujarat	4.7	4.9	3.5	5.4	5.7	4.1	2.2	6.1	5.0	4.3
Jammu & Kashmir	0.8	0.6	0.8	0.8	0.5	1.0	—	0.6	0.6	0.9
Kerala	3.7	5.7	6.6	3.3	4.4	2.0	3.1	4.8	6.2	3.7
Madhya Pradesh	7.3	6.6	5.2	5.0	5.0	8.7	10.5	6.0	6.0	5.2
Madras	7.5	8.5	10.7	9.7	8.8	6.8	5.1	8.4	11.3	9.2
Maharashtra	9.0	11.1	12.3	15.8	10.2	8.2	5.9	10.8	10.5	11.2
Mysore	5.3	5.3	6.2	5.1	4.2	5.6	4.2	4.2	5.3	4.5
Orissa	3.9	3.5	1.6	1.9	1.8	4.7	2.7	2.2	3.4	2.7
Punjab	4.8	5.0	9.6	3.9	5.7	4.1	0.8	5.0	5.3	4.5
Rajas than	4.7	4.2	2.9	3.5	4.3	5.3	3.2	3.4	3.3	3.4
Uttar Pradesh	17.1	12.2	16.2	10.3	15.4	18.9	2.3	14.3	14.7	14.5
West Bengal	8.2	10.7	6.9	13.8	12.0	6.4	15.0	11.8	9.9	11.0
		17.2	33.1	33.6	20.4	13.4	65.7	21.0	20.8	21.6
Index of Concentration		8.6	16.5	16.8	10.2	6.7	32.9	10.5	10.4	10.8

**Table : (contd) State—wise distribution of working Population by major Occupational groups and indices of concentration.  
India-1961 ; Females**

State	Population	Profes.& tech.	Admin. & manag.	Clerical	Sales	Farmers	Miners.	Tranp.& comm.	Craftsmen prod, process	service
All India	1.00.00	1.00.00	1.00.00	1.00.00	1.00.00	1.00.00	1.00.00	1.00.00	1.00.00	1.00.00
Andhra Pradesh	8.4	8.1	1.83	6.1	26.4	11.9	20.2	5.3	12.5	21.9
Assam	2.6	1.9	0.9	2.4	1.2	2.8	0.1	1.7	3.8	1.0
Bihar	10.9	4.7	7.9	3.7	9.5	11.0	20.5	3.3	8.8	6.8
Gujarat	4.7	5.3	3.0	4.9	3.6	4.9	2.9	9.6	3.6	2.5
Jammu & Kashmir	0.8	0.5	0.1	0.5	0.1	0.8	—	4.1	4.5	0.2
Kerala	4.0	11.7	9.5	6.8	2.7	1.7	0.4	5.1	8.6	8.2
Madhya Pradesh	7.4	5.5	3.1	4.1	6.4	12.7	13.6	11.8	7.7	4.8
Madras	7.9	13.3	17.9	7.9	10.6	7.6	8.0	6.4	16.0	9.5
Maharashtra	9.0	12.4	11.5	29.3	9.8	13.2	8.2	16.7	7.0	8.3
Mysore	5.4	5.2	7.7	6.3	8.0	6.3	3.5	3.7	6.4	3.6
Orissa	4.1	1.3	1.8	2.6	4.5	3.5	5.6	7.1	6.7	2.9
Punjab	4.4	5.5	2.8	1.5	0.6	2.3	0.2	2.2	1.8	4.4
Rajasthaa	4.5	3.3	2.3	4.4	1.9	6.4	3.2	2.9	3.0	2.7
Uttar Pradesh	16.5	9.3	6.8	4.4	8.0	11.2	1.5	4.3	7.8	13.8
West Bengal	7.7	8.1	4.1	9.6	4.6	2.1	6.3	11.0	3.9	7.7
$\sum_{j=1}^k  X_j - Y_j $		39.4	61.0	56.6	49.4	32.5	57.6	58.6	44.0	38.6
Index of concentration		19.7	30.5	2.83	24.7	16.3	28.8	29.3	22.3	19.3

**TABLE 6**

**Percentage Distribution of Workers in Broad Occupational Groups and Indices of Concentration by Taking AH India as Base, 1961 Males**

States	White Collar	Agricultural	Manual	Service	Index of
Andhra Pradesh	Workers	Workers	Workers	Workers	Concentration
	1.10	69.95	15.71	4.20	2.17
Assam	9.21	76.59	1.570	2.82	8.24
Bihar	7.70	76.77	13.22	2.60	8.18
Gujarat	12.49	64.59	19.65	3.17	4.19
Jammu & Kashmir	7.73	76.94	11.90	3.36	8.34
Kerala	16.24	45.97	33.69	3.89	27.68
Madhya Pradesh	7.31	76.77	13.69	2.19	8.03
Madras	12.43	59.64	24.08	3.81	9.10
Maharashtra	13.98	61.98	19.96	4.03	6.75
Mysore	10.02	70.77	16.40	2.70	2.06
Orissa	5.56	77.46	13.62	2.09	9.34
Punjab	13.45	63.08	20.00	3.24	5.56
Rajasthan	8.66	76.74	11.95	2.30	8.16
Uttar Pradesh	8.36	74.42	14.22	2.70	5.81
West Bengal	15.66	56.20	22.72	4.61	11.66
All India	10.59	68.61	17.26	3.24	—

Source : Computed from Table 1.

TABLE 6 (Contd.)

Percentage Distribution of Workers in Broad Occupational Groups and Indices of Concentration by Taking All India as Base, 1961 Females.

State	White Collar Workers	Agricultural Workers	Manual Workers	Service Workers	Index of Concentration
Andhra Pradesh	3.55	79.21	13.06	4.15	3.11
Assam	1.30	80.84	16.83	0.77	4.05
Bihar	1.67	85.78	10.97	1.51	3.48
Gujarat	2.22	86.61	9.84	1.25	4.32
Jammu & Kashmir	0.83	90.03	8.59	0.52	7.71
Kerala	5.53	49.20	38.41	6.82	33.12
Madhya Pradesh	1.19	89.17	8.63	0.96	6.91
Madras	3.18	71.13	23.14	2.53	11.20
Maharashtra	2.39	88.59	7.42	1.59	6.31
Mysore	2.65	82.90	13.03	1.36	0.99
Orissa	1.95	73.77	22.06	1.75	9.60
Punjab	2.66	82.28	10.36	4.63	2.52
Rajasthan	1.07	91.15	6.56	1.08	8.88
Uttar Pradesh	1.84	85.85	9.20	3.03	3.75
West Bengal	5.75	67.03	19.77	6.97	15.06
All India	2.41	82.28	12.86	2.34	—

Source : Computed from Table I.

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