

THE STATUS OF WOMEN

LITERACY AND EMPLOYMENT

ASOK MITRA

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**THE STATUS OF WOMEN :
LITERACY AND EMPLOYMENT**

Asok Mitra



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Preface

The ICSSR/JNU Project on The Analysis and Utilization of Census and Related Data 1872–1971 has undertaken among other things a study of the longterm trends of literacy and employment. This study involves much statistical calibration for ensuring comparability in respect of concepts, definitions, age groups, administrative divisions etc. This study is in two parts. The first part is a cross-sectional study of crude literacy rates mainly with reference to 1971 census. In the absence of published figures of the population in 0–4 or 0–6 age group state by state, most rates have been calculated on the entire female or male populations. Crude census figures have been generally presented in this cross-sectional study in the well justified belief that statistically refined figures will not in any significant measure distort the broad dimensions of the problems that the monograph seeks to establish. The second part contains mostly adjusted figures in tables that purport to show longterm trends. The central facts of female illiteracy (the stain of Indian illiteracy is now lodged heavily in this half of the population) and growing female unemployment stand out bold and clear for broad policy considerations at the federal and state levels. Special acknowledgements are due to the Family Planning Foundation with whose assistance some of the basic material including the first draft was prepared.

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The Status of Women with Particular Reference to Literacy and Employment

A. LITERACY

Employment certainly holds the key to improvement in status. It determines the level of food availability, nutrition and the level of other essential demands. It holds the key to productivity. It also determines the structure of the household and the relationships within the family. But education is equally important, for, education determines aspirations, technology, productivity, vertical and horizontal mobility. Education also changes perception of costs and values of human beings and their contribution to the economy of the household and of the nation. In 1921 when Soviet Russia was about to launch on a countrywide electrification plan which, it was claimed, would show the way to Soviet Communism, Strumilin was able to convince Lenin that even four years of traditional education at school was vital for raising the productivity of the nation, which was as necessary at that stage of the nation's life as the generation of electricity.

It is the main argument of this Paper that female literacy and education, employment of women outside of home and improvement in public health leading to a palpable and enduring reduction in infant and child mortality are among the most important qualities of life that are also prime movers of the small family norm. Even if one does not agree that they are the preconditions of steady and snowballing movement toward the reduction of family size, one nevertheless concedes that they are strongly and positively associated in any situation that has led to a continuing reduction in the fertility rates. These factors constitute almost the core of the most rudimentary development or modernising process and their strengthening contributes to a certain improvement in the quality of female lives that sustains steady fertility reduction. There is also the underlying hypothesis, almost universally borne out by history, that a literate mother would like to see her child gain literacy, a mother with some

standard of education would like to see her child achieve an appreciably higher standard than her own. This aspiration helps to increase the cost of the child as well as in increasing satisfaction to the parents which constitutes a deterrent to unwanted children.

1. General Review of Female Literacy

The broad census statistics of 1971 will suffice to illumine the state of female literacy and education at the beginning of the decade. Much of the data used below, which are uncalibrated but yield a kind of dimensional picture that this exercise is mainly concerned with, were processed by O. P. Sharma of the office of the Registrar General.

The great divide in literacy and education in India's history came in 1951, after Independence in 1947. Up to 1941 even simple literacy had progressed at a snail's pace, but after 1951 the pace of literacy and education quickened impressively. Nonetheless, the following figures will reveal how the goal of universal literacy eluded the country in the first 25 years after Independence. The march of literacy failed to keep pace with the growth of population and the total number of illiterates among males and females at the end of each census decade exceeded the corresponding number at the beginning of the decade, although the percentage increase in literacy for the year was substantial.

TABLE 1
Population and Proportion of Population Literate
and Illiterate, All India 1951-71
(Absolute Figures in Million)

Item	Sex	1951	1961	1971
Total Illiterate	M	139.71	148.35	172.00
	F	158.70	185.36	214.74
Total literate	M	44.15	77.94	112.05
	F	13.82	27.58	49.37
Illiteracy rate per	M	75.98	65.56	60.55
100 of population	F	91.99	87.05	81.31
Literacy rate per 100	M	24.02	34.44	39.45
of population	F	8.01	12.95	18.69
		1951-61		1961-71
Rate of decrease in	M	- 13.71		- 7.64
illiteracy	F	- 5.37		- 6.59
Rate of increase in	M	+ 43.38		+ 14.55
literacy	F	+ 61.67		+ 44.32

Table 1 shows the alarming pace at which the absolute number of illiterate males and females has increased in each of the two decades. Paradoxically enough, it also shows the even more impressive rate at which the population literate has increased in each of the two decades; more than 76 per cent in 1961 on the 1951 base for males and almost 100 per cent in 1961 on the 1951 base for females; more than 43 per cent in 1971 on the 1961 base for males and more than 78 per cent in 1971 on the 1961 base for females. The pace of rate of increase unfortunately slowed down markedly in the decade 1961–71 compared to 1951–61 for both males and females, which is also reflected in the two inter-decadal rates of decrease in illiteracy.

In 1961, this author attempted an essay in determining the levels of development of all the districts of India in terms of what he identified as some three dozen indicators. He divided his grading in four quartiles, Quartile IV representing the highest level of development and Quartile I the lowest level. The number of districts in each level stood roughly at 76 to 80.

Out of the total number of districts in each level, 15 districts or a total of 60 for the four levels were selected, keeping an eye to their geographical distribution. The crude census, rural and urban, rates of illiteracy for 1961 and 1971 for males were tabulated for these districts to find out the rates of differential reduction of literacy of the four groups of districts in the four levels, separately for rural and urban. An analysis of variance of the changes between 1961 and 1971 for rural and urban separately revealed no significant difference in the rate of change among any of the four levels of development. In other words, more effort seems to have gone in the course of the decade to improving literacy in districts in the lower levels of development, which is a very heartening deduction to make, on the assumption, of course, that the districts, selected at each level with an eye to fair geographical distribution, were truly representative of each level.

Another exercise was undertaken on similar lines. Data were prepared of females per 1000 males by educational levels in rural and urban areas in 1971. The same set of districts in each of the four levels of development referred to above was employed to construct these rates. Three categories were selected for examination in the rural set: primary, middle and matriculation. Five categories were selected for the urban set: primary, middle, matric, graduate and teaching. Analysis of variance was undertaken to test whether the sex-ratio in different educational categories varies significantly over the four levels. The following F values were derived:

**F Values to test whether the Sex-ratio
in Selected Educational Categories in
Selected Districts (1971 Census) varies
Significantly over the
Four Levels of Development of 1961**

	Rural	Urban
1. Primary	1.76	2.29
2. Middle	3.15*	4.02*
3. Matric	1.80	10.08**
4. Graduate & above	—	5.43*
5. Teaching	—	7.58*

* Significant at 5 per cent level

** Significant at 1 per cent level

This means that the different levels of development made very little difference to the level of effort at improving primary education either in the rural or urban areas in the selected samples. But in middle school, proficiency significantly changed with the levels and an examination of the figures shows that performance improved with each higher level, both in the rural and urban areas. Again, in matriculation the rural areas showed no significant difference between levels, denoting thereby that not much differential effort was evident in the rural areas as districts progressively climbed from level to level. On the other hand, the difference in effort in the urban areas was marked, being significant at middle and graduate levels and highly significant at matric and teaching levels. In other words, the distances among districts in each of the four levels of developments *inter se* were long and significant in the urban areas, the performance of districts accelerating from one level to the next higher level. What is significant is that this improvement or difference is not noticeable in the matter of primary education either in the rural and urban areas denoting that while on the one hand districts in the lower levels may have improved in primary education, districts in the higher level, on the other, may have slackened or been resting on their oars.

On the other hand, certain improvements occurred between 1951 and 1961 and again between 1961 and 1971 in the progress of literacy and educational standards (a) as between different age groups adopted in the census classifications, (b) as between the rural and urban areas of different states and as between states, and (c) as between males and females. In other words, literacy and educational standards (a) gained ground faster among the younger age groups

than the older ones, (b) accelerated generally among males more than among females, although in many areas acceleration among females was also remarkable, (c) differed widely in acceleration among (i) rural and (ii) urban areas of states, and (iii) among states. The picture was very uneven but certainly not disheartening except that one wishes that female literacy and educational level accelerated faster in rural and urban areas of states. The absolute levels of attainments in female literacy will be discussed shortly, which confirm some of the findings briefly noticed here. R. N. Bose, one of the author's research colleagues, undertook an analysis of the variances observed for (i) literates, (ii) literates without educational levels and (iii) primary and junior basic for the age groups 5-9, 10-14, 15-24, 25-34, and 35 + separately for males and females for the rural and urban areas respectively of the following states: Andhra Pradesh, Assam, Bihar, Gujarat, Jammu & Kashmir, Kerala, Karnataka, Maharashtra, Madhya Pradesh, Orissa, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal. The 'F' values derived by Bose were as follows:

TABLE 2
'F' Values for the Three Lowest Educational
Levels in 14 States of India, 1961-1971

'F' Values	Educational Levels					
	Literates		Literates without Educational Level		Primary or Junior Basic	
	M	F	M	F	M	F
<i>I Due to Age</i>						
1961 Rural	83.06	18.54	22.35	22.55	33.85	11.81
1971 Rural	234.10	38.07	14.73	10.59	50.81	7.28
1961 Urban	289.13	126.43	5.42	22.74	26.51	26.14
1971 Urban	438.08	282.86	142.36	119.98	164.82	141.81
<i>II Due to States</i>						
1961 Rural	21.29	25.79	13.46	39.97	10.37	8.80
1971 Rural	48.32	38.74	6.47	7.73	8.22	4.71
1961 Urban	18.84	27.88	2.98	9.73	5.74	8.29
1971 Urban	23.23	49.03	3.12	3.51	5.41	7.75

Table Value of 'F'

F.05	F.01
2.00	2.66
2.84	4.31

The age groups were 5-9, 10-14, 15-24, 25-34, 35 +. The states were fourteen in number.

Although all the F values are in the highly significant category, yet the low F values for females for 1961 and 1971 Rural Literates and Primary or Junior Basic deserve notice. Improvements for females as well as males in 1971 Urban are remarkable in all educational levels. Differences between states, in rural as well as urban areas, dwindled from 1961 to 1971, particularly with respect to literacy without educational level and primary and junior basic. The improvements are certainly commendable, but still quite far from the basic goals of universal literacy and compulsory primary education. The details are discussed below.

2. Female Literacy in Rural Areas

But another look at the overall distribution of female literacy in rural India will show the leeway to be made up before literacy and education among females takes its rightful share in propelling the movement for the small family norm. All rates in this section are based on the total population, from which the base or the age group 0-4 has not been excluded. The following abstract table gives the overall picture for India for combined rural and urban.

TABLE 3
Literacy Rates by Sex, 1901-71
All India Combined Rural Urban

Census year	Percentage of literate population to total population	Percentage of literate males to total male population	Percentage of literate females to total female population
1901*	5.35	9.83	0.69
1911*	5.92	10.56	1.05
1921*	7.16	12.21	1.81
1931*	9.50	15.59	2.93
1951@	16.67	24.95	7.93
1961	24.02	34.44	12.95
1971	29.34	39.51	18.44

* For undivided India

@ Excludes Jammu & Kashmir

This shows the dramatic rise in literacy since Independence, although partial autonomy brought about by the Government of

India Act of 1937 must have paved the way for the improved 1951 results.

The picture of rural distribution even in 1971 leaves a great deal to be desired. The statistics have been taken from a paper by O. P. Sharma on Regional Variation in Rural Female Literacy presented in a 1972 Seminar of the Institute of Economic Growth on the First Results of the 1971 Census.

Of the total count of 264 million females in 1971, 214 million were enumerated in rural India. The rate of literacy among the 50 million urban females was 42 (41.91) per cent, while that among the 214 million rural females was only 13 (12.92) per cent. Much like male literacy, the rate for female literacy therefore showed the results of concentration of effort in the urban areas to the comparative neglect of rural areas in which the overwhelming majority of females live.

The following table arranges the states and union territories in descending order of rural female literacy in 1971.

TABLE 4
States and Union Territories
Arranged in Descending Order of
Rural Female Literacy Rate 1971

Rank	State/Union Territories/ Other areas	Rural female literacy rates, 1971
1.	Kerala	52.63
2.	Lakshadweep	30.36
3.	Goa, Daman & Diu	30.25
4.	Andaman & Nicobar Islands	25.57
5.	Pondicherry	23.49
6.	Delhi	20.00
7.	Punjab	19.78
8.	Tamil Nadu	18.87
9.	Meghalaya	18.59
10.	Himachal Pradesh	17.93
11.	Maharashtra	17.49
12.	Chandigarh	17.47
13.	Tripura	17.43
14.	Gujarat	17.07
15.	Nagaland	16.74
16.	Assam	16.26
17.	Manipur	16.05
18.	West Bengal	14.63
19.	Mysore	14.37

TABLE 4—*Concl'd.*

Rank	State/Union Territories/ Other areas	Rural female literacy rates, 1971
20.	Orissa	11.94
21.	Andhra Pradesh	10.88
22.	Haryana	9.00
23.	Dadar & Nagar Haveli	7.77
24.	Uttar Pradesh	6.59
25.	Bihar	6.16
26.	Madhya Pradesh	6.00
27.	Jammu & Kashmir	4.74
28.	Rajasthan	3.85
29.	Arunachal	2.86
30.	ALL INDIA	12.92

The above table will show that there are 10 states and union territories (Ranks 20–29) which are below the national average of rural female literacy of 12.92 per cent. These 10 states and union territories contribute more than 53 per cent of the rural female population of the country and cover almost all states in North-West and Central India. Among the Southern and South-Western states, where the literacy rate is appreciably higher, Andhra Pradesh, a large territory with a large population, trails behind with only 10.88 per cent literacy among rural females.

It will have been by now appreciated that the problem of illiteracy in India is embedded more in illiteracy among females than among males. While redoubled effort must be made to push up the male literacy rate, even greater effort is needed for improving female literacy. The problem here is compounded by a variety of cultural, economic, sociological and even anthropological factors. First and foremost is the reluctance to give girls and women freedom of movement and acknowledge the equality of the sexes in most communities, although the Constitution insists on it. Second is the urge to keep women in economic subjection as long as is possible. Literacy and education is the greatest subversive force against this subjection. Third is the compulsion to marry girls while still young so that they continue to be in economic and social subjection for the rest of their lives. Fourth is the survival of a variety of ethnographic and anthropological mores, including variants in the institutions of marriage, divorce, separation and inheritance, requiring strict enforcement of the economic and social subjection of women.

Nowhere are these factors more reflected in all their severity than in the case of literacy among rural women of the scheduled castes and scheduled tribes.

The following statement gives a summary account of literacy among the population of (a) women other than those belonging to the scheduled castes and tribes; (b) women belonging to the scheduled castes and (c) women belonging to the scheduled tribes in rural India in 1961 and 1971.

Population in 1961 and 1971 (in million)

Category of rural women	1961 Total population	1971 Total population	1961 Literate population	1971 Literate population
Total population of rural women	176.5	213.6	15.0	28.1
Total population of rural women exclusive of women of scheduled castes and tribes	133.8	161.2	13.9	25.6
Population of women of scheduled castes	28.3	34.2	0.7	1.7
Population of women of scheduled tribes	14.5	18.2	0.4	0.7

This statement shows first that the absolute number of illiterates has increased in all categories between 1961 and 1971 in spite of the decadal increase in percentage literate. Secondly, the gap in literacy between rural women not belonging to scheduled castes or tribes on the one hand and rural women of scheduled castes and tribes on the other has markedly widened in the course of the decade. Thirdly, the gap in literacy between rural women of scheduled castes and those of scheduled tribes has still further widened even when weighted by their respective populations. The problem, therefore, unfolds as follows. The problem of illiteracy in India is in a large measure a problem of illiteracy among women. The problem of illiteracy among women is largely a problem of illiteracy among rural women. The problem of illiteracy among rural women is largely compounded by the problem of illiteracy among rural women of the scheduled castes and the scheduled tribes. The following table compares rural female literacy rates for 1961 and 1971 among (1) rural women exclusive of those belonging to scheduled castes and tribes, (2) rural women of scheduled castes and (3) rural women of scheduled tribes.

TABLE 5
Progress of Crude Literacy Rate per 100 of
Rural Women (1) not belonging to Scheduled
Castes and Tribes, (2) belonging to
Scheduled Castes and (3) belonging to
Scheduled Tribes, 1961 and 1971

State/Union Territory	Excluding SC & ST		Scheduled Castes		Scheduled Tribes	
	1961	1971	1961	1971	1961	1971
INDIA	10.40	15.88	2.52	5.06	2.90	4.36
Andhra Pradesh	9.91	12.71	2.50	3.72	1.34	1.76
Assam	13.46	17.96	15.28	14.50	14.56	15.99
Bihar	6.33	7.77	0.75	0.74	2.81	4.13
Gujarat	15.66	20.55	9.34	11.80	3.90	5.68
Haryana	—	10.99	—	2.54	—	—
Himachal Pradesh	6.36	21.76	—	8.99	1.71	5.45
Jammu and Kashmir	1.62	5.14	0.88	3.49	—	—
Kerala	40.03	55.72	16.45	32.35	11.18	18.47
Madhya Pradesh	4.72	8.44	0.86	2.57	1.27	2.05
Maharashtra	10.48	18.57	3.51	9.26	1.57	3.79
Manipur	13.00	16.03	12.28	15.71	17.49	17.59
Meghalaya	—	13.85	—	12.24	—	19.65
Mysore	10.52	16.44	1.70	3.91	2.48	6.32
Nagaland	26.35	24.14	40.00	—	9.68	16.12
Orissa	11.20	17.87	3.23	4.86	1.67	2.38
Punjab	10.71	24.62	1.82	7.36	3.79	—
Rajasthan	3.72	5.71	0.38	0.55	0.22	0.41
Tamil Nadu	13.64	21.88	4.23	8.95	1.55	4.02
Tripura	11.23	26.13	3.69	9.31	1.84	5.42
Uttar Pradesh	4.60	8.56	0.68	1.74	—	4.33
West Bengal	12.66	18.78	3.83	8.23	1.60	2.77
Andaman & Nicobar Islands	19.81	30.38	—	—	6.31	11.17
Arunachal	—	12.76	—	17.50	—	1.56
Chandigarh	—	21.64	—	7.37	—	—
Dadra & Nagar Haveli	35.87	47.39	20.14	24.43	0.41	2.59
Delhi	11.54	25.62	2.42	6.21	—	—
Goa, Daman & Diu	—	31.59	—	15.23	—	4.32
Lakshadweep	29.03	60.67	—	—	10.61	28.94
Pondicherry	20.84	30.89	3.85	6.82	9.68	—
Sikkim	30.37	—	—	6.45	—	—

The first two places in overall performance must go to Kerala and Lakshadweep. Then follow Nagaland, Assam, Meghalaya and Manipur. In all other states and union territories the literacy attainments of rural women of scheduled castes and tribes are grossly behind those of rural women not belonging to scheduled castes and tribes.

A deeper study of rural female literacy at the district level reveals a much more interesting but distressing picture of the trends of expansion of literacy in the country.

Of the 352 districts in the country which had rural population, as many as 83 had less than 5 per cent literacy among the rural females. In 58 districts, the percentage was between 5.01 and 7.50 and in still another 55 districts between 7.51 and 10.00, which means that in as many as 196 out of 352 districts (or more than 55 per cent of the districts) in the country, the percentage of rural female literacy was less than 10 per cent. The number of districts which have, comparatively speaking, reasonably higher rates of literacy (25.01 and above) is only 32, or less than 10 per cent of all districts, which shows that the so-called 'expansion of education' is not spread uniformly, but is confined to small pockets.

Table 6 gives the total number of districts in each state/union territory which enjoy 5 per cent or less rural female literacy.

Table 7 betrays the sadly vulnerable position of Uttar Pradesh, which out of a total of 54 districts had as many as 45 under 10 per cent rural female literacy rates, which put it at the bottom of low rural female literacy states in India. Rajasthan, which occupied the second position in the previous range, moved down to the tenth position in this range and exhausted its entire population in the two ranges. Bihar, Madhya Pradesh and Andhra Pradesh maintained their sequence of ratios. Bihar exhausted all its districts in these two ranges and so did Madhya Pradesh for all but two districts, Narasimhapur (13.40) and Balaghat (10.80). West Bengal, which does not appear in the lowest range, stands fifth in the second range.

Table 8 gives the number of districts in each state that registered a rural female literacy rate above 10.01 in 1971.

Only 34 districts claimed a rate of rural female literacy higher than 25. Of these, 8 were in the range above 50. Of these 8 again, 6 belonged to Kerala, another (Kanya Kumari) was a district of Kerala before it went to Tamil Nadu, the eighth was Pondicherry. Of the 26 districts claiming rural ratios between 25 and 50, one each belonged to Andhra Pradesh, Assam, Gujarat, Haryana, Nagaland, Andaman

TABLE 6
Distribution of Rural Female Population of the Districts with Female Literacy
Rate of 5 Per Cent or Less

Rank	State/Union Territory	No. of districts with 5 per cent female literacy or less	Share of rural female population to total rural female population	Total rural female population in these districts (thousands)	Total rural female literate population in these districts (thousands)	Col. 6 as percentage of col. 5
1	2	3	4	5	6	7
	INDIA	83	100.00	39,740	1,541	3.88
1.	Uttar Pradesh	16	28.44	11,301	462	4.09
2.	Rajasthan	22	21.18	8,416	296	3.51
3.	Bihar	6	17.87	7,102	307	4.32
4.	Madhya Pradesh	20	17.57	6,984	255	3.65
5.	Andhra Pradesh	3	5.21	2,069	95	4.58
6.	Orissa	2	3.74	1,488	47	3.15
7.	Jammu & Kashmir	8	3.50	1,391	41	2.98
8.	Gujarat	1	1.39	553	25	4.55
9.	Haryana	1	0.65	257	9	3.60
10.	Arunachal	4	0.45	181	4	2.42

TABLE 7
Distribution by Number of Districts in Each State/Union Territory in which
Rural Female Literacy Varied Between 5.01 and 10.00 Per Cent in 1971

Rank	State/Union Territory	No. of districts 5.01 to 10.00 rural literacy	Share of rural female popula- tion to total rural female population	Total rural female popula- tion in these districts (thousands)	Total rural female literate population in these districts (thousands)	Col. 6 as Percentage of col. 5
1	2	3	4	5	6	7
	INDIA	113	100.00	76,525	5,490	7.17
1.	Uttar Pradesh	30	27.59	21,112	1,448	6.86
2.	Bihar	11	23.40	17,910	1,233	6.88
3.	Madhya Pradesh	21	12.29	9,403	691	7.35
4.	Andhra Pradesh	11	11.30	8,646	623	7.21
5.	West Bengal	5	5.55	4,247	351	8.27
6.	Orissa	6	4.52	3,463	266	7.67
7.	Maharashtra	4	3.34	2,554	214	8.36
8.	Haryana	4	3.30	2,528	197	7.79
9.	Mysore	6	2.31	3,300	246	7.45
10.	Rajasthan	4	2.29	1,753	96	5.47
11.	Gujarat	2	1.10	842	63	7.47
12.	Himachal Pradesh	4	0.43	329	25	7.74
13.	Assam	1	0.23	173	15	8.64
14.	Jammu & Kashmir	1	0.16	120	12	9.90
15.	Nagaland	1	0.11	82	6	7.81
16.	D & N Haveli	1	0.05	37	3	7.77
17.	Arunachal	1	0.03	26	2	5.94

TABLE 8
States showing in Five Ranges Number of Districts which enjoyed a Crude Rural Female Literacy Rate above 10.00 in 1971

State/ Union Territory	Range 10.01- 15.00	Range 15.01- 20.00	Range 20.01- 25.00	Range 25.01- 50.00	Range 50.01 +
Andhra Pradesh	3	1	2	1 (max 25.28)	—
Assam	4	3	—	1 (max 25.80)	—
Gujarat	4	5	6	1 (max 26.53)	—
Haryana	1	1	—	—	—
Himachal Pradesh	4	1	—	1 (max 26.11)	—
Jammu & Kashmir	1	—	—	—	—
Kerala	—	—	—	4 (max 37.18)	6 (max 65.92)
Madhya Pradesh	2	—	—	—	—
Maharashtra	3	10	4	4 (max 27.93)	—
Manipur	2	2	1	—	—
Meghalaya	—	1	1	—	—
Mysore	5	3	2	3 (max 35.37)	—
Nagaland	1	—	—	1 (max 28.11)	—
Orissa	2	2	1	—	—
Punjab	2	2	4	3 (max 27.82)	—
Rajasthan	—	—	—	—	—
Tamil Nadu	3	6	1	2 (max 27.93)	1 (50.43)
Tripura	1	2	—	—	—
Uttar Pradesh	5	3	—	—	—
West Bengal	2	6	2	—	—
A & N Islands	—	—	—	1 (max 25.66)	—
Arunachal	—	—	—	—	—
Chandigarh	—	1	—	—	—
Dadra & Nagar Haveli	—	—	—	—	—
Delhi	—	—	1	—	—
Goa, Daman & Diu	—	2	—	1 (32.01)	—
Lakshadweep	—	—	—	1 (30.56)	—
Mizoram	—	—	—	1 (44.10)	—
Pondicherry	—	—	1	2 (max 27.79)	1 (61.03)
Sikkim	—	—	—	—	—

& Nicobar Islands, Lakshadweep, Mizoram and Pondicherry, the rate in no case ever exceeding 30.

Looked at another way, as many as 40 million rural females in 1971, out of a total of 214 million for India, lived in districts where the rural female literacy rate was as low as 5.00 or less, 43 million lived in districts where this rate was between 5.01 and 7.50, and another 34 million in districts having rural female literacy rates between 7.51 and 10.00 per cent. In short, 54.36 per cent of the rural female population lived in 196 districts where the rural female literacy rate was less than 10.00 per cent. Only 8.01 per cent of the rural female population lived in districts with a rural female literacy rate of 25.01 and above. And, significantly enough, it is this rural female population, apart from the female population in selected urban areas, that seems to have quite palpably brought down its fertility level in the last twenty years.

The picture becomes even more revealing when it is recognised that the areas of low rural female literacy constitute large and solid continuous blocks of territory, sometimes cutting across the boundaries of states, particularly where the lowest levels of literacy (up to 10.00 per cent) are concerned. Rural female literacy at the levels of 10 to 15 per cent of rural female population is obtained in scattered blocks of districts all over the country. A very similar picture obtains for levels of rural female literacy between 15 and 25 per cent, while literacy above 25 per cent is confined to Kerala, West Godavari in Andhra Pradesh, Kanya Kumari and Tirunelveli in Tamil Nadu, Ratnagiri and Jalgaon in Maharashtra, Kangra in Himachal Pradesh, Hoshiarpur, Jullunder and Ludhiana in Punjab, Mizoram and Sibsagar in Assam, and Mokokchong in Nagaland.

Solid contiguous blocks of districts of rural female literacy below 5.00 per cent confined to or cutting across state boundary are:

Jammu & Kashmir	Anantnag, Srinagar, Baramulla, Ladakh, Doda, Udhampur, Rajauri, Poonch.
Rajasthan,	Entire Rajasthan (except districts of
Gujarat,	Ganganagar, Jhunjhunu, Pali and Kota),
Madhya Pradesh	Banaskantha, West Nimar, Dhar, Jhabua, Ratlam, Ujjain, Dewas, Sehore, Shajapur, Rajgarh, Vidisha, Guna, Shivpuri, Morena.
Uttar Pradesh,	Moradabad, Rampur, Pilibhit, Bareilly,
Bihar	Budaun, Shahjahanpur, Kheri, Bahraich, Sitapur, Bara-Banki, Gonda, Basti, Gorakhpur, Champaran.

Madhya Pradesh,	:	Tikamgarh, Chhatarpur, Panna, Banda,
Uttar Pradesh,		Allahabad, Sidhi, Shahdol, Surguja,
Bihar		Palamau, Hazaribagh, Santal Parganas.
Orissa, Madhya	:	Kalahandi, Koraput, Bastar, Adilabad,
Pradesh, Andhra		Karimnagar, Medak, Gulbarga.
Pradesh, Mysore		

The number of isolated districts which have rural female literacy rate of 5.00 per cent and below is not much. These districts are: Jind in Haryana, Singhbhum & Saharsa in Bihar and Uttar Kashi and Tehri Garhwal in Uttar Pradesh.

Solid contiguous blocks of districts of rural female literacy between 5.01 and 10.00 per cent are:

Andhra Pradesh,	:	Nizamabad, Nanded, Parbhani,
Maharashtra,		Aurangabad, Bhir, Bidar
Mysore		
Orissa, Andhra	:	Bolangir, Baudh Khondmals, Ganjam,
Pradesh, Mysore		Srikakulam, Visakhapatnam, Khammam,
		Warangal, Nalgonda, Hyderabad,
		Mahbubnagar, Kurnool, Cuddapah,
		Anantpur, Bellary, Raichur
Bihar, West	:	Dhanbad, Purulia, Ranchi, Mayurbhanj,
Bengal, Orissa,		Keonjhar, Sundargarh, Raigarh, Raipur,
Madhya Pradesh		Durg, Bilaspur, Mandla, Seoni,
		Chhindwara, Betul, East Nimar,
		Hoshangabad, Raisen, Sagar, Damoh,
		Jabalpur, Satna, Rewa
Rajasthan,	:	Ganganagar, Hissar, Jhunjhunu,
Haryana, Madhya		Mahendragarh, Karnal, Saharanpur,
Pradesh, Bihar,		Muzaffarnagar, Bijnor, Meerut, Buland-
West Bengal,		shahr, Aligarh, Gurgaon, Mathura, Etah,
Uttar Pradesh		Agra, Bhind, Gwalior, Datia, Jhansi,
		Jalaun, Hamirpur, Fatehpur, Hardoi,
		Unnao, Lucknow, Rae Bareli, Pratapgarh,
		Sultanpur, Faizabad, Azamgarh, Jaunpur,
		Ghazipur, Varanasi, Mirzapur, Shahabad,
		Ballia, Deoria, Saran, Muzaffarpur,
		Darbhanga, Purnea, West Dinajpur,
		Malda, Murshidabad

Isolated Pockets

The number of isolated pockets in this range of female literacy (5.01 to 10.00) are also very few which are scattered throughout the country and are listed below:

Rajasthan	Ajmer, Pali
Rajasthan,	Kota, Mandsaur
Madhya Pradesh	
Gujarat	Panchmahals and the Dangs
Madhya Pradesh	Indore
Mysore	Mandya, Mysore
West Bengal	Cooch Bihar
Assam	Mikir Hills
Nagaland	Tuensang
Arunachal	Lohit
Uttar Pradesh	Chamoli, Almora

If these districts are examined in the Census Atlas of India they will be found to be distinguished variously by high ratios of scheduled castes or scheduled tribes or both, relatively dry and arid and therefore poor areas or/and areas not sufficiently opened up by communication presenting a variety of long standing social and economic handicaps and deprivations. They present challenging problems of priority and concentration of time bound effort in the shape of task forces and interesting possibilities of mobilising local resources, for these are also areas that are plagued with difficulties of importing school teachers, health workers and the like and demand recruitment from non-conventional sources and upgrading the skills of locally available prospective workers. Unless these are urgently attended to, and viable and improving solutions are evolved, the family planning movement, however successfully pursued in small pockets, is unlikely to make lasting, continuing and expanding impact.

This point will bear a little elaboration. A persistent impediment that has had a way of defeating earnest efforts at implementation of literacy drives, schooling, preventive medicine and nutrition, is the scarcity and even non-availability of qualified personnel to serve the rural population. Scarcity and non-availability continue even where enormous investments are made for higher quality housing and other amenities together with higher or hardship pays and extra incentives

and remunerations of many kinds to induce fixed tenure service from urban immigrants into rural areas. Such an obsession with the search for qualified personnel has invariably made the better the enemy of the good. Immigrant personnel usually cover themselves with an air of indispensability and superiority. A good proportion of them never leave off grudging and grumbling as though they were obliging both the government and the local population, which they are expected to serve with dedication. Their scarcity value adds to their bargaining power and they soon become a privileged class. Unless this obsession with so called quality, which is often illusory through lack of application and dedication, gives way to a policy of (a) building up services, that will be as good as local material can be trained up to, and of (b) deliberately keeping down bombastic but unrealisable expectations in those areas that need to be rapidly brought up to a minimum level of education and services and is replaced by a policy of making education and services as good as local manpower is capable of coming up to, large areas and populations of the country will continue to be neglected. The present policy is too much based on the indispensability of foreign aid, while what is needed is a very rigorous programme of selfhelp and import substitution.

With the spread of education in the last fifteen years, there is practically no village of more than 500 persons in any part of the country, however remote, inaccessible or backward, which cannot boast of at least two or three literate young men and women with part of the underemployed pool inasmuch as their skill attainments are not always matched by the kind of work available. The obsession with the formally trained primary school teacher has gone to such ridiculous lengths that numerous schools all over the country have rather gone without school teachers for years than appoint untrained local men and women who undoubtedly would have well served this crying need. Nowhere could this lack of faith in indigenous material be more pathetic and harmful than in the matter of school teachers, public health workers, paramedical nutrition and family planning staff. And yet with the help of a graduated curricula, a combination of training and inservice retraining, a policy of learning by doing and following the trained leader, and an array of graduated referral arrangements, young village men and women could within a very short time be trained to become excellent school teachers, public health workers, paramedical and curative personnel for the treatment of not-too-complicated ailments (most ailments start by being not-too-complicated but acquire gravity with continuing neglect), effec-

tive nutrition workers and nutrition educators, family planning motivators and family planning personnel. What is also not realised, in spite of the many shining examples that have recently cropped up all over the country and which are still dammed by 'experts' with faint praise, is that such workers, locally raised and trained, can be much more professionally responsible and ethically sound than qualified immigrants, the reason being the former's accountability to their own people. This accountability to the local community makes all the difference between a good and effective worker and a mercenary and a bureaucrat. Besides, local recruits are certainly more integrated to the social and economic fabric, the local population, too, being reconciled to the tenet that the best that they can have is what they locally produce but that this local quality can also, in its turn, be indefinitely improved.

Oddly enough, the most effective opposition to these ideas has come from the professionals themselves. Even as the trade union movement has been steadily breeding bastions of privilege and staunchly opposing national policies of breaking down income inequalities and even opposing higher productivity, similarly, the fraternity of qualified school teachers, medical personnel, public health staff, nutrition, M. C. H. and family planning workers have been most anxious jealously to guard their positions of privilege, particularly in those parts of the world which had formerly been under West European colonial regimes. These regimes had carefully nursed the concepts of 'quality', 'privilege' and 'elitism' which went very well with the concept of remote and minority bureaucratic control and authoritarianism of not dirtying one's hands by actual doing, unless absolutely necessary. The bogey of 'quality' has, therefore, reigned supreme, so much so that despite the acknowledged need, utter desirability and proven feasibility of raising the required numbers of medical, paramedical and preventive public health, nutrition, MCH and family planning staff through courses of training ranging from six weeks to three years, the entrenched medical associations in many underdeveloped countries have successfully resisted any departure from privileged and unconscionably expensive courses of minimum of five years' duration. This in spite of (a) the thrice proven baneful consequence of grievous one-way drain from the village and the district to the city, from the city to the metropolis and from the metropolis out of the country on the trail of well-paid and comfortable jobs, and (b) the thrice-proven fact that this brain drain is proving irreversible. It is, therefore, difficult to

figure out to which kind of clientele or audience the following passage (para 7.08) taken from the April 1975 Report of the Group on Medical Education and Support Manpower set up by the Ministry of Health and Family Planning recommending 'A Programme for Immediate Action', is addressed to persuade or to deceive.

7.08 Certain issues have now become irrelevant to the discussion of the problem of duration. For instance, it need no longer be linked up with the problem of producing an adequate number of doctors for rural areas. There are immense socio-economic issues involved in getting doctors to settle in rural areas. While these should be squarely faced and sustained efforts made to overcome them, it is idle to hope that a mere reduction in the course would achieve the result. Similarly, there is hardly any sense in suggesting the reintroduction of the diploma or licentiate course for meeting the needs of rural areas. With the type or reorganisation of the health services that we have proposed earlier, what we need, even for rural areas, is a better trained doctor rather than a less trained one. All things considered, we strongly feel that there is no justification to make any change in the present policy of producing an adequately trained general practitioner, both for rural and urban areas. Nor should financial considerations be allowed to outweigh academic needs and standards in medical education should not be diluted to save funds. It may prove to be a costly and unwise economy in the long run.

It would be difficult to think of a better piece of make belief and defence of elitism. And yet on numerous occasions, a variety of far-flung audiences in the country have in the last several years heard from some or all of this very distinguished group eloquent praise of each-one-teach-one and the bare-foot doctor concepts of selfhelp and all that goes with it.

B. EMPLOYMENT

1. Gainful Employment of Women 1901-71 An Historical Survey

One of the first occasions, after D. R. Gadgil's *The Industrial Evolution of India in Recent Times* on which attention was drawn to the rapidly declining trend in women's employment in the non-agricultural sector was in this author's 1951 Census Report of West Bengal (Census of India, 1951, Vol. VI, Part 1A, PP. 507-535).

Starting with 1,062,000 women workers in the non-agricultural sector in 1901 in West Bengal, the figure had touched as low as 609,000 in 1951. The Report showed two trends: one of rapid decline in the traditional occupations, including cultivation, agricultural labour, other occupations in the primary sector, in household industry, trade, commerce and services and another of small but promising increase in what could be called the modern occupations like teaching, nursing, modern industries, offices etc.

Although these preliminary remarks are not specifically addressed to the question of deterioration in the employment of women down the decades, the fact that the impact of unemployment falls more heavily in India on women than on men is enough to suggest what must have occurred to women's employment during the historic period, when the general employment situation deteriorated so dramatically. Decline in women's employment cannot but in its turn have serious and far-reaching effects on fertility, mortality and nutrition.

The biggest declines occurred in those sectors which had traditionally relied on reciprocity of support: wages in a mixture of cash, kind or goods and services from those households in the community which "purchased", mainly by barter, a variety of goods and services from those producers in the community who were adept at it and found a fixed clientele, whose volume increased with the growth of population. This was the traditional *jajmani* system which embraced not only cultivation and agricultural implements but goods covering an entire range of traditional goods like footwear, clothing, housing material, utensils, cutlery, pottery, etc. and services that village households would require.

The effects of the preternatural destruction of household industries, a process which was started by the British soon after the battle of Plassey (1757), have been vividly and elaborately described by British as well as Indian scholars since 1780. The first vehement criticism was raised in the British Parliament when the conduct of Robert Clive and Warren Hastings in this regard was severally censured but in this matter as in most others the attitude of the British Government was the same as when it censured General Napier for having annexed Sind by wrongful and immoral means but kept the territory all the same and General Napier put the seal on this infamous act by his celebrated pun "peccavi, I have sin'd" (In Latin, peccavi means I have sinned).

What has, however, neither been so fully investigated nor docu-

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mented is the concurrent effect of morbidity and mortality due to famines, epidemics and disease throughout the eighteenth, nineteenth and the twentieth centuries on both the production of household industries and the demand for them. We have known how in the last decade, following years of near famine and drought, buoyancy takes much more than a reasonable timelag to return in the market, despite successive bumper crops. Few estimates are attempted of the extent of the population put out of purchasing power as a result of their having had to exhaust their reserves and sources of loan to keep alive in times of distress. On such occasions, large numbers of people are compelled to mortgage their services in advance for supplies of grain and other victuals. This circumstance leads one to fear whether, in spite of the drive for abolition of bonded labour in the recent "twenty-point programme", the programme as it is being worked out will achieve permanent success, because drought, scarcity and maldistribution tend to perpetuate the preconditions of bonded labour.

The loss of purchasing power suffered during famines and droughts by the majority of the population of a suffering area is only partly made good in propitious years. Differentially, however, the loss in purchasing power sustained by the poorer deciles of the population, puts this large mass of population at a lengthening economic distance from those upper deciles of the population who did not suffer as much by comparison, but rather, in fact, profited by the drought and scarcity in cornering most of the money coughed up by the poorer deciles to buy food. The upper deciles of the population can muster but a comparatively small demand for goods produced in the household industries sector, the bulk of the demands being increasingly satisfied by the organised manufacturing and import sectors in India, in British as well as Indian regimes. The chief consumers of goods produced in the cottage and household industries sectors in India have been the poorer deciles of the population. Successive grievous famines, pandemics, epidemics and drought throughout the nineteenth and well into the twentieth century decimated the poorer deciles of the population who demanded goods from this sector. The continuing fall in demand for goods from the cottage and household industries sector caused increasing diminution in production and supply, the breach so created being filled by imported or indigenous goods more and more manufactured in the organised sector.

On the other hand, chronic morbidity caused by disease, malnu-

trition, epidemics and pandemics and the escalating mortality rates among the poorer deciles of the population, caused by famine and disease, took selective greater toll throughout the nineteenth, and still does in the current century, by way of mortality of the artisan classes, who are even more vulnerable than the small and marginal farmer and agricultural labourer. There is evidence, which needs to be quantified and built up from one decade to another, of far heavier mortality and morbidity during and after famines and epidemics among the artisan classes, like flayers of skin, cobblers, carpenters, weavers, spinners, potters, tinmen, coppersmith, braziers, blacksmiths, wheelwrights, cartwrights and hundreds of other artisan classes, who usually serve the village community, particularly its poorer six or seven deciles. This differential and heavier mortality and morbidity among artisans and cottage industry workers decimated not only the numbers of workers, but greatly and progressively reduced their investments, skills, capital stock and working capital. Continuing levels of heavy mortality and morbidity precluded replenishment of any of these attributes, to which was added rapidly dwindling demand from their traditional clientele and the severance of client-service (jajmani) relationships which had so long maintained the viability of these low investment enterprises.

The very small absolute growth of population throughout the nineteenth century—rather the absolute declines that punctuated that century and the first quarter of the current century—prevented that growth of demand for consumer goods produced in the cottage and household industries sector that the growth of population itself generates. Additionally, the decimation and impoverishment of the poorer deciles of the population through famines, epidemics and pandemics led to a continuous fall in demand for these goods, which has continued well into our times, through a steady differential fall in purchasing power among the numerical majority of the population. On top, heightened morbidity and mortality among the artisan classes led to progressive decline in the production of goods produced in the cottage and household industries sector and led to the steady withering of machinery, capital stock, working capital, credit and production market traditions.

In short, the contribution of famines, epidemics and droughts, by increasing morbidity and mortality among both producers and consumers of products of cottage and household industries, chiefly among the poorer deciles of the population, who were the principal consumers as well as the producers of such goods must have been

substantial though certainly not as substantial as the effect of the discriminating policies of the rulers against this sector. It is quite possible that differentially higher morbidity and mortality among young and adult women, which have been noticed continuously since the middle of the last century were, among other reasons, responsible for the dwindling proportion of women workers among total workers that has been in evidence since 1901. Differences between pre-1901 and post-1901 data in concepts and definitions and jurisdictional changes of political divisions make it difficult to produce a comparable series of employment by specific occupations going back to 1872, but, when that is ready at least for parts of present-day India, it will probably be evident that the process of decline documented in this section started much earlier than in 1901.

In the survey that follows, crude census figures have been generally used, except where specifically stated, without any attempt at graduating or modifying them in respect of definitional changes from census to census or of graduating them against mortality and survival. The intention of this exercise is to focus on the dimensions of the problem and bring out the policy issues behind the statistics which statistical graduations or corrections would hardly alter to any appreciable degree.

2. Changing Employment Patterns 1901–71 in Twenty Large Cities of India

We might introduce the statistics by dwelling at some length on the picture delineated in the 1951 Census Report for West Bengal which roughly starts for other states, too. Section 3 of Chapter 5 of the Report (pp. 507–535) gives an account of (i) Declining and (ii) Improving livelihoods. Declining livelihoods were noticed in following classes and divisions.

TABLE 9
Declining Livelihoods in West Bengal 1901–1951
Number of Selfsupporting Persons per 10,000 of Total Population

	1951	1931	1921	1911	1901
Livelihood class V Production other than cultivation	671	551	729	804	770
Division 0 Primary Industries not elsewhere specified	140	190	211	289	304
0.1 Stock raising	10	26	46	105	92
0.2 Rearing of small animals & insects	3	0.3	3	12	—

TABLE 9—*Concl'd.*

	1951	1931	1921	1911	1901
0.3 Plantation Industries	104	131	120	102	165
0.6 Fishing	19	31	38	64	44
Division 2 Processing and Manufacturing Foodstuffs, Textiles, Leather & Products thereof	275	248	319	341	282
2.0 Food Industries otherwise unclassified	6	1	5	6	20
2.1 Processing of Grains & Pulses	45	46	75	119	111
2.2 Vegetable oil & dairy products	5	10	15	11	10
2.6 Cotton Textiles	31	30	37	44	47
Division 4 Processing & Manufacturing not elsewhere classified	105	72	115	108	120
4.4 Non-metallic mineral products	12	11	20	20	17
4.6 Wood & woodproducts other than furni- ture fixtures	31	32	44	46	50
Division 6—Commerce—Stationary					
6.1 Retail trade in foodstuffs	130	63	125	162	169
6.2 Retail trade in fuel	9	3	7	15	24
6.3 Retail trade in textiles & leather goods	23	11	31	37	21
6.4 Wholesale trade in foodstuffs	8	61	2	3	—
Livelihood class VIII other Services and Miscellaneous Sources	547	623	584	580	—
5.2 Construction and Maintenance	3	22	19	39	90
8.5 Village Officers & Servants incl. village watchman	3	9	10	12	14
9.0 Services otherwise unclassified	123	275	173	163	—
9.1 Domestic Services	112	154	149	141	148
9.2 Barbers & beauty shops	13	14	18	19	21
9.2 Laundries & Laundry services	11	11	15	17	17
9.6 Legal & business services	12	8	77	39	19
9.8 Religious, charitable & welfare services	14	18	21	40	50

Source: Report on the Census of West Bengal 1951, Part I-A, Chapter 5, Section 3, pp. 507–535.

Improving Livelihoods were noticed in the following categories.

TABLE 10
Improving Livelihoods in West Bengal 1901–1951
Number of Selfsupporting persons per 10,000 of
Total Population

	1951	1931	1921	1911	1901
Division 3—Processing & Manufacturing— Metals, Chemicals & Products thereof	102	20	48	32	32
Division 4—Processing & Manufacturing— not elsewhere specified					

TABLE 10—*Concl'd.*

	1951	1931	1921	1911	1901
4.8 Paper & paper industries	5	0.3	1	1	2
4.9 Printing & Allied Industries	11	6	6	6	6
6.0 Retail trade otherwise unclassified	81	17	32	16	39
7.3 Transport by air	2	0.03	0.01	—	—
7.4 Railway Transport	38	12	17	30	13
5.5 Works & Services—Electric power & gas supply	7	1	2	2	—
Division 8—Health, Education & Public Administration	116	79	60	61	62
9.4 Hotels, restaurants & eating homes	15	3	3	2	1
9.5 Recreation services	11	4	4	7	25

Two more tables are reproduced. The first (Table 11) shows important non-agricultural livelihood sub-divisions in which employment of women has declined in West Bengal in 1951 from previous decade.

Table 12 shows important livelihood subdivisions in which employment of women has increased in West Bengal in 1956 from previous decades.

An exercise by Raghunath Chaudhury and Sunil Kumar Sinha has been completed under the ICSSR Project on Implications of Population Change at Nehru University on the changes in the industrial and occupation structure of the population of twenty major cities of India between 1901 and 1971. The selection had to be restricted to the availability of data in uniform format for each census and so the order of the top twenty Indian cities in order of population had to be disregarded. The cities included in the analysis were—(1) Agra, (2) Ahmedabad Town Group, (3) Ajmer, (4) Allahabad, (5) Amritsar, (6) Bangalore, (7) Bombay, (8) Calcutta, (9) Delhi Town Group, (10) Jaipur, (11) Jodhpur, (12) Kanpur Town Group, (13) Lucknow Town Group, (14) Madras, (15) Madurai, (16) Mysore, (17) Nagpur, (18) Poona, (19) Srinagar and (20) Varanasi.

Two tables were constructed; the first (Table 13) showing the participation rates of males, the second (Table 14) the participation rates of females.

TABLE 11
Important Non-Agricultural Livelihood Subdivisions in which Employment
of Women has Declined in West Bengal in 1951 from Previous Decades

Non-agricultural Livelihood Subdivisions	Number of self-supporting persons of both sexes per 10,000 of total population					Number of self-supporting females				
	1951	1931	1921	1911	1901	1951	1931	1921	1911	1901
(1) 0.1 Stock Raising	10	26	46	105	92	2,566	2,924	3,738	10,427	5,952
(2) 0.2 Rearing of small animals and insects	3	0.3	3	12	—	927	476	2,260	13,816	—
(3) 0.6 Fishing	19	31	38	64	44	6,148	21,488	30,600	58,377	31,338
(4) 2.1 Processing of grains & pulses	45	46	75	119	111	88,141	84,791	127,566	218,048	190,271
(5) 2.2 Vegetable oil and dairy products	5	10	15	11	10	1,232	1,010	4,527	4,371	3,604
(6) 2.6 Cotton textiles	31	30	37	44	47	5,270	6,361	15,119	19,894	14,810
(7) 2.7 Wearing apparel (except footwear) & made up textile goods	26	15	18	19	19	2,746	1,517	2,890	5,437	4,107
(8) 4.4 Non-metallic mineral products	12	11	20	20	17	2,789	4,169	11,822	12,474	7,103
(9) 4.6 Wood and Wood products other than furni- ture & fixtures	31	32	44	46	50	5,627	9,347	21,414	30,642	35,324

TABLE 11—*Concl'd.*

Non-agricultural Livelihood Subdivisions		Number of self-supporting persons of both sex per 10,000 of total population					Number of self-supporting females				
		1951	1931	1921	1911	1901	1951	1931	1921	1911	1901
(10)	6.1 Retail trade in food stuffs (including beverages & narcotics)	130	63	125	162	169	34,290	38,945	100,350	119,398	121,292
(11)	6.2 Retail trade in fuel (including petrol)	9	3	7	15	14	4,534	1,028	8,833	21,663	18,610
(12)	6.3 Retail trade in textiles and leather goods	23	11	31	37	21	1,147	2,490	7,583	6,440	2,268
(13)	5.2 Construction and maintenance of Roads & Bridges	3	22	19	39	90	928	9,008	11,054	21,847	47,627
(14)	9.0 Services otherwise unclassified	123	275	173	163	350	29,902	93,623	110,941	97,672	136,849
(15)	9.2 Barbers and beauty shops	13	14	18	19	21	2,254	2,558	4,580	7,635	5,667
(16)	9.3 Laundries & Laundry services	11	11	15	17	17	3,078	4,604	8,716	11,385	9,979
(17)	9.8 Religious, Charitable and welfare services	14	18	21	40	50	2,993	1,894	726	14,173	22,122
TOTAL		508	618	705	932	1,122	194,572	286,233	472,719	673,699	656,923

(Source: A. Mitra, Report on the Census of West Bengal 1951 Vol. VI Part IA, p. 532)

TABLE 12
Important Non-Agricultural Livelihood Subdivisions in which Employment of Women
has Increased in West Bengal in 1951 from Previous Decades

Non-agricultural Livelihood Subdivisions		Number of self-supporting persons of both sexes per 10,000 of total population					Number of self-supporting females				
		1951	1931	1921	1911	1901	1951	1931	1921	1911	1901
(1)	1.1 Coal mining	46	21	36	34	13	33,717	17,321	29,069	25,013	12,495
(2)	1.5 Stone-quarrying, clay and sand pits	1	..	0.003	..	..	979	..	..	..	..
(3)	3.0 Manufacture of metal products otherwise unclassified	33	16	21	26	6	7,384	871	1,766	1,284	243
(4)	3.1 Iron and Steel (Basic Manufacture)	12	0.9	7	1	14	1,889	7	1,010	25	368
(5)	6.0 Retail trade otherwise unclassified	81	17	32	16	39	9,168	5,408	3,864	2,690	8,516
(6)	8.1 Medical and other Health services	23	15	13	14	13	10,161	7,598	6,801	9,946	8,319
(7)	8.2 Educational Services & Research	26	13	11	11	13	7,249	1,785	1,551	1,459	1,134
(8)	8.6 Employees of Municipalities and Local Boards	10	5	6	4	3	3,260	210	274	572	115
(9)	9.4 Hotels, restaurants and eating houses	15	3	3	2	1	1,895	559	954	388	309
(10)	9.5 Recreation Services	11	4	4	7	25	9,755	561	714	911	29,841
TOTAL		258	95	133	115	127	85,457	34,320	46,003	42,288	61,340

(Source: A. Mitra op. cit. p. 533)

TABLE 11—*Concl'd.*

Non-agricultural Livelihood Subdivisions		Number of self-supporting persons of both sex per 10,000 of total population					Number of self-supporting females				
		1951	1931	1921	1911	1901	1951	1931	1921	1911	1901
(10)	6.1 Retail trade in food stuffs (including beverages & narcotics)	130	63	125	162	169	34,290	38,945	100,350	119,398	121,292
(11)	6.2 Retail trade in fuel (including petrol)	9	3	7	15	14	4,534	1,028	8,833	21,663	18,610
(12)	6.3 Retail trade in textiles and leather goods	23	11	31	37	21	1,147	2,490	7,583	6,440	2,268
(13)	5.2 Construction and maintenance of Roads & Bridges	3	22	19	39	90	928	9,008	11,054	21,847	47,627
(14)	9.0 Services otherwise unclassified	123	275	173	163	350	29,902	93,623	110,941	97,672	136,849
(15)	9.2 Barbers and beauty shops	13	14	18	19	21	2,254	2,558	4,580	7,635	5,667
(16)	9.3 Laundries & Laundry services	11	11	15	17	17	3,078	4,604	8,716	11,385	9,979
(17)	9.8 Religious, Charitable and welfare services	14	18	21	40	50	2,993	1,894	726	14,173	22,122
TOTAL		508	618	705	932	1,122	194,572	286,233	472,719	673,699	656,923

(Source: A. Mitra, Report on the Census of West Bengal 1951 Vol. VI Part IA, p. 532)

TABLE 12
Important Non-Agricultural Livelihood Subdivisions in which Employment of Women
has Increased in West Bengal in 1951 from Previous Decades

Non-agricultural Livelihood Subdivisions	Number of self-supporting persons of both sexes per 10,000 of total population					Number of self-supporting females				
	1951	1931	1921	1911	1901	1951	1931	1921	1911	1901
(1) 1.1 Coal mining	46	21	36	34	13	33,717	17,321	29,069	25,013	12,495
(2) 1.5 Stone-quarrying, clay and sand pits	1	..	0.003	..	..	979	..	..	..	..
(3) 3.0 Manufacture of metal products otherwise unclassified	33	16	21	26	6	7,384	871	1,766	1,284	243
(4) 3.1 Iron and Steel (Basic Manufacture)	12	0.9	7	1	14	1,889	7	1,010	25	368
(5) 6.0 Retail trade otherwise unclassified	81	17	32	16	39	9,168	5,408	3,864	2,690	8,516
(6) 8.1 Medical and other Health services	23	15	13	14	13	10,161	7,598	6,801	9,946	8,319
(7) 8.2 Educational Services & Research	26	13	11	11	13	7,249	1,785	1,551	1,459	1,134
(8) 8.6 Employees of Municipalities and Local Boards	10	5	6	4	3	3,260	210	274	572	115
(9) 9.4 Hotels, restaurants and eating houses	15	3	3	2	1	1,895	559	954	388	309
(10) 9.5 Recreation Services	11	4	4	7	25	9,755	561	714	911	29,841
TOTAL	258	95	133	115	127	85,457	34,320	46,003	42,288	61,340

(Source: A. Mitra op. cit. p. 533)

TABLE 13
Work Participation Rates of Males (Working
Males/Total Males \times 100) 1901-1971

Towns	1901	1911	1921	1931	1951	1961	1971
Agra	54.3	59.2	60.5	55.2	47.8	47.7	45.7
Ahmedabad	59.3	63.8	64.9	—	57.0	51.7	42.2
Ajmer	69.7	66.4	65.4	57.1	50.7	44.9	42.2
Allahabad	59.1	60.7	61.0	46.2	51.7	49.9	45.7
Amritsar	67.7	65.0	59.0	58.3	50.0	52.8	51.9
Bangalore	59.1	54.5	54.8	51.2	51.1	51.0	49.1
G. Bombay	75.9	78.7	78.2	67.0	66.7	61.7	57.7
Calcutta	75.5	76.7	74.1	66.6	63.3	61.4	57.0
Delhi (TG)	63.2	65.8	65.7	63.1	58.8	52.8	51.2
Jaipur	46.1	68.3	68.4	59.4	42.0	48.9	47.2
Jodhpur	61.1	64.1	61.9	68.8	44.9	44.8	42.9
Kanpur	65.7	68.8	68.9	62.7	59.6	54.3	50.3
Lucknow (TG)	63.1	66.3	65.7	58.3	55.0	52.2	47.9
Madras	54.3	58.5	60.4	55.1	53.1	52.2	49.1
Madurai	52.5	60.0	57.4	54.2	49.8	50.6	37.0
Mysore	51.8	51.4	48.4	50.6	44.8	46.6	44.6
Nagpur	61.5	64.1	61.0	54.8	—	50.8	44.6
Poona	54.3	—	59.1	42.4	52.7	47.1	47.4
Srinagar	59.4	62.2	—	49.0	—	49.8	47.5
Varanasi	62.1	61.0	59.9	54.1	55.3	51.9	47.6

TG stands for Town Group.

Source: 1. Paper No. 1 of 1967, Subsidiary Tables, 1961 Census.

2. Part II-A (ii), Primary Census Abstract, 1971 Census.

TABLE 14
Work Participation Rates of Females
(Female Workers/Total Females \times 100) 1901-1971

Towns	1901	1911	1921	1931	1951	1961	1971
Agra	6.4	16.2	9.2	5.6	1.8	2.4	2.0
Ahmedabad	25.0	19.0	16.6	—	7.0	5.5	4.7
Ajmer	17.3	16.5	14.1	8.4	9.0	5.3	4.4
Allahabad	28.2	16.8	21.0	18.6	6.3	5.5	4.0
Amritsar	9.1	6.6	5.4	2.8	3.7	2.8	2.8
Bangalore	12.4	13.2	12.7	14.4	7.4	8.0	6.8
G. Bombay	21.2	22.3	24.8	12.4	10.6	8.8	7.7
Calcutta	15.5	14.7	12.4	8.6	7.6	6.1	5.7
Delhi (TG)	16.9	10.4	10.3	7.0	5.5	4.5	4.8
Jaipur	24.5	28.5	26.8	17.2	9.3	6.0	3.2
Jodhpur	29.0	27.4	22.5	23.7	6.3	5.0	3.5
Kanpur (TG)	20.4	13.3	14.0	9.2	3.5	3.2	2.4
Lucknow (TG)	22.7	20.6	21.5	7.0	4.6	4.4	3.6

TABLE 14—*Concl'd.*

Towns	1901	1911	1921	1931	1951	1961	1971
Madras	11.6	12.3	10.2	38.9	6.6	6.3	5.1
Madurai	17.1	22.9	22.4	46.8	7.3	9.9	8.1
Mysore	16.9	16.7	12.3	10.8	5.6	7.8	6.5
Nagpur	29.9	30.3	24.7	18.1	—	13.8	7.2
Poona	22.5	—	17.8	10.1	12.3	10.4	8.1
Srinagar	25.1	13.6	—	3.4	—	3.0	1.8
Varanasi	23.9	20.8	22.4	17.3	8.6	7.4	3.8

TG stands for Town Group.

Source: 1. Paper No. 1 of 1967, Subsidiary tables, 1961 census.

2. Part II-A (ii), Union Primary Census Abstract, 1971 census.

For the twenty populous cities of India the participation rate of 1971 is the lowest ever recorded, even as that is true for the country as a whole. Further, the participation rate has generally been falling from decade to decade in most cities, so the fall cannot be explained away by definitional or conceptual changes alone. Of the two plausible explanations of the decline in the participation rate one is a change in the age structure of the population and the second is withdrawal from the work force demanded by—(i) education, (ii) marriage and other social and demographic reasons and (iii) migration. But when one considers the fact that in the last decade at any rate the rate of migration into the cities has slowed down, migration cannot be accepted as a reason for the further fall in the participation rate in 1971.

As for the contribution of the age structure in the change in the participation rates, Jaipal P. Ambannavar in his 'Changes in Economic Activity of Males and Females in India, 1911–61' (Demography India, Vol. 4 (2), December 1975, pp. 344–364), worked out (a) 'correction ratios' for other censuses by using the age standardisation of the population and working force in selected age groups in 1961 and (b) correction ratios for the other census by working out the Urban-Rural Standardisation of the 1961 Worker Rate. By applying these correction ratios he concluded that "of the total decline in the worker rate among males, 46 per cent of the decline could be attributed to changes in the age structure as between 1911 and 1961, 10 per cent to urbanisation and the remaining 44 per cent to unknown causes. The corresponding percentage with respect to the female worker rates were 26, 30 and 44."

Since the age structure has changed but marginally in the Indian population other considerations may have to be taken into account,

chief of which are the state of morbidity, literacy, school attendance, age selective and skill selective, rural-urban migration and marital status. Besides, the state of the economy has been uneven from one census year to another which, too, has had its effect on the WPR. There is also the question of changes in the definition of urban areas which has affected the category of urban areas below 20,000 population.

What awaits investigation, however, is the probable effect of improving infant and child survival since the 1920s in keeping women progressively more away from non-agricultural work than from agricultural work in the last fifty years. Higher rates of infant, and to some extent of toddler, survival may have had the effect of tying up mothers of all age groups in the task of rearing them and holding them back from returning to work, thus prolonging interruptions in work status sharply reducing their employability. Mothers may be finding it more difficult, particularly in unprotected and highly competitive sectors requiring skills, albeit low paid, to produce and rear babies and at the same time keep their jobs. (This may also explain the high positive response in KAP surveys to the desirability of limiting the number of children per mother although commensurate action following from this response may not have followed). Another fact awaiting investigation is the indisputable evidence of high morbidity and mortality persisting among women in the first two-thirds of their reproductive period which remove from the working force large numbers of women permanently, their places being irretrievably lost to men. This phenomena may not have much effect on the age structure but are likely to have great effect on sex differentiated employment. The great depression of the 1930s, followed by the Trade Union movements which have been mainly male-oriented and the cycles of buoyancy and depression in production that have been with the country since 1928, have had the effect of reducing the ambit of blue collar jobs for women to which the legal requirements of maternity leave and benefits may have contributed bigger and progressive impediments. Improving infant and child survival along with increasing mortality among women in the earlier reproductive periods may be the demographic reasons which have been causing interrupted skill acquisition among females, and making it increasingly difficult to enable them to have babies and yet keep their jobs. This may be compelling them to yield to males in the job market.

The first table (Table 13) will show that except for Jaipur, which

shows a marginal increase of WPR from 46.1 in 1901 to 47.2 in 1971 with higher rates in intermediate years, all other cities have registered declines. Ajmer shows the largest gap of 27.5 between 1901 and 1971 rates for males followed by Calcutta (– 18.5) and Greater Bombay (– 18.2).

Female WPRs have fallen far more drastically (Table 14). The most spectacular declines have been:

	1901	1971
Jodhpur	29.0	3.5
Allahabad	28.2	4.0
Srinagar	25.1	1.8

The minimum fall went to Agra from 6.4 in 1901 to 2.0 in 1971.

The two tables were subjected to analysis of variance to gain some insight into the variations in the participation rates over decades as well as over cities. Ahmedabad, Nagpur, Poona and Srinagar had to be excluded from this analysis of variance because the rates for these cities were not available for all the census decades. The analysis had, therefore, to be confined to 16 cities and 7 census decades.

Since this analysis is a method of partitioning the total variation in the participation rates in terms of means over decades as well as over cities separately, the following rates show significant variations.

TABLE 15
Analysis of Variance of Work Participation Rates
of 16 Cities, 1901–71

Sex	Source of variation	Sum of squares	Degrees of freedom	Mean sum of squares	F. Ratio
Male	Cities	15802.70	15	1053.51	15.29*
	Year	16313.06	6	2718.84	39.46*
	Error	6201.30	90	68.90	
Female	Cities	1739.92	15	115.99	4.244*
	Year	3579.55	6	596.59	21.829*
	Error	2459.92	90	27.33	

* Significant at 1 per cent level.

The results show that (1) the rates for males and females vary highly significantly both over cities as well as over decades, (2) the cities vary over their respective participation rates and (3) their work participation rates differ very significantly from each other over

decades. In other words, most cities have had unique experience in respect of WPR growth or decline from decade to decade and of the sexes. There has been no uniform trend for WPR variations over decades and for the sexes even for the broad regions of India. WPR variations have been tending to be unique for each of the cities and have not followed any common path for India or all the 16 cities as a whole.

Sinha and Chaudhury carried out a trend analysis of the workforce of the sixteen cities for the seven decades, a long enough period for observing the growth of the workforce engaged in manufacturing, services, trade and commerce activities. Taking time as the independent variable, they attempted a bivariate regression analysis by fitting a simple regression equation in the form $Y = a + bX$ where Y denotes the workforce, X the measure of the time factor and b the regression coefficient of the trend parameter. The exercise was carried out for male and female workforces separately.

The results were interesting and rewarding. Total male workers showed significant positive or increasing trend over the period 1901–71 in all the sixteen cities. As for female workers, only Bangalore, Bombay, Delhi and Mysore showed significant positive trends. In Varanasi alone the female workforce showed a significant negative trend showing a fall in female employment.

The exercise was repeated separately for detecting trends, if any, in the four major census Industrial categories—(1) manufacturing including household industries, (2) transport, storage and communication, (3) trade and commerce activities and (4) services. The results can be summarized as follows:

TABLE 16
Trend of Workers in Male and Female Workforce
in Important Cities, 1901–61

Major Industrial Categories	Trend
(1) Manufacturing including household industries	<p>(1) Male workers—positive significant trend in all cities except Agra, Amritsar and Jodhpur.</p> <p>(2) Female workers—none significant except a positive significant trend in Bangalore.</p>
(2) Transport, storage and communication	<p>(1) Male workers —significant trend <i>only</i> in Ajmer and Jodhpur. Trend in significant in all other cities.</p> <p>(2) Female workers—no significant trend in any city.</p>

TABLE 16—*Concl'd.*

Major Industrial Categories	Trend
(3) Trade and Commerce	<p>(1) Male workers—significantly growing in Allahabad, Amritsar, Greater Bombay, Calcutta, Delhi, Jodhpur, Lucknow, Madras, Madurai.</p> <p>(2) Female workers—significantly growing only in Greater Bombay.</p>
(4) Services	<p>(1) Male workers—growing rapidly and significantly in all cities except Ajmer, Amritsar, Calcutta and Varanasi. Ajmer is a predominately service-cum-trade city, Amritsar and Calcutta Trade & Commerce-cum-manufacturing and Varanasi Manufacturing-cum-service. All the remaining sixteen—Agra, Ahmedabad, Allahabad, Bangalore, G. Bombay, Delhi, Jaipur, Jodhpur, Kanpur, Lucknow, Madras, Madurai, Mysore, Nagpur, Poona and Srinagar are predominantly manufacturing-cum-service cities and have been witnessing the growth of these activities—manufacturing and services—over time.</p> <p>(2) Female workers—growing significantly in the service sector in Amritsar, Bangalore, G. Bombay, Calcutta, Delhi, Mysore. In Varanasi female workers in services show a significant negative or declining trend, registering an overall absolute fall.</p>

It will be pertinent here to reproduce in advance from this research project the trends in selected two digit major groups of the Census Industrial classification. This selection will obviate elaborate discussion subsequently. Chaudhury and Sinha analysed the growth pattern of workers in the industrial divisions (one digit) and major groups (two digits) of male and female workers in thirteen cities only each for the period 1901–61 on account of the fact that (i) data for citywise workers in industrial divisions and major groups are not available for the 1971 census so far and (ii) data for all of the Census years 1901–61 are not available for Ajmer, Amritsar, Bangalore, Jaipur, Jodhpur, Madurai and Mysore.

The highlights are presented in Table 17 below.

3. Changes in the Female Participation Rate, 1901–71

If this is what has been happening over the decades in some of the most populous and comparatively prosperous cities of India then the

The highlights are presented below:

TABLE 17
Trends in Male and Female Workforce 1901-61

Industrial Division & Major Group	Male Workforce Trends	Female Workforce Trends
2 & 3 Manufacturing	No significant trend in Agra, Srinagar & Varanasi. Remaining 10 cities show significant progressive growth.	No significant growth in any city.
20 Foodstuffs	Significant growth only in Allahabad, Bombay, Calcutta, Kanpur, Nagpur and Poona. No significant growth in other cities.	Lucknow and Madras show significant negative trend or decline. No trend in other cities.
21 Beverages	Significant growth in Allahabad & Bombay only. No significant trend in other cities.	No significant trend in any city.
22 Tobacco Products	Significant growth in Bombay city alone.	Significant growth in Madras alone.
23 Textile-Cotton	Significant growth in Ahmedabad, Bombay, Delhi, Kanpur, Madras, Nagpur.	No significant trend in any city.
27 Textile-Miscellaneous	Significant growth in Ahmedabad, Bombay, Calcutta, Delhi, Kanpur, Madras, Nagpur, Poona & Varansi.	No significant trend in any city.
28 Wood & Wood products	Significant growth in Calcutta, Delhi, Kanpur, Lucknow, Nagpur, Poona and Srinagar.	No significant trend in any city.
30 Printing & Publishing	Significant trend in Ahmedabad, Allahabad, G. Bombay, Calcutta, Delhi, Kanpur, Madras, Nagpur and Poona.	Significant growth in Allahabad alone.
31 Leather & Leather products	Significant growth in Agra and Kanpur only.	Significant decline in Allahabad alone.

33 Chemicals & products	Significant growth in Calcutta alone (over 1901-61) very recent trends more encouraging in a number of cities.	Significant growth in Poona only.
34-Non metallic mineral	Significant growth in Calcutta and Kanpur only.	No significant trend in any city.
35 Products		
36 Basic metals & products	Significant growth in Ahmedabad, Bombay, Calcutta, Nagpur, Srinagar and Varanasi.	No significant trend in any city.
38 Transport Equipment	Significant growth in Allahabad, Bombay, Calcutta, Lucknow & Madras.	No significant trend in any city.
39 Miscellaneous	Significant growth in Allahabad, Calcutta, Kanpur & Nagpur.	No significant trend in any city.
4 & Construction	Significant positive trend in Bombay, Kanpur, Madras & Poona only.	Significant trend in Bombay & Poona only.
40 Activities		
5 Electricity, gas, water supply	Significant growth in Allahabad, Bombay, Kanpur, Madras & Poona only.	Significant growth in Madras alone.
50 Electricity & gas	Significant growth in Allahabad, and Lucknow.	No significant trend in any city.
51 Water supply & sanitary services	Significant growth in Bombay & Madras only.	Significant growth in Madras only.
6 Trade & Commerce	Significant growth in all cities except in Agra, Srinagar & Varanasi where no trend is visible.	Significant growth in Bombay only. Significant decline in Lucknow only.
64-Retail Trade	Significant growth in all cities except in Allahabad, Agra, Srinagar & Varanasi.	Significant growth in Calcutta and Significant decline in Lucknow only.
68		
69 Trade & Commerce Miscellaneous	Significant growth in Ahmedabad, Allahabad, Bombay, Kanpur, Nagpur & Poona.	No significant trend in any city.
7 Transport Storage & Communication	Significant growth in Ahmedabad, Allahabad, Bombay, Delhi, Kanpur, Lucknow, Madras, Nagpur and Poona.	Significant growth in Calcutta, Delhi & Kanpur only.

The highlights are presented below:

TABLE 17
Trends in Male and Female Workforce 1901-61

Industrial Division & Major Group	Male Workforce Trends	Female Workforce Trends
2 & 3 Manufacturing	No significant trend in Agra, Srinagar & Varanasi. Remaining 10 cities show significant progressive growth.	No significant growth in any city.
20 Foodstuffs	Significant growth only in Allahabad, Bombay, Calcutta, Kanpur, Nagpur and Poona. No significant growth in other cities.	Lucknow and Madras show significant negative trend or decline. No trend in other cities.
21 Beverages	Significant growth in Allahabad & Bombay only. No significant trend in other cities.	No significant trend in any city.
22 Tobacco Products	Significant growth in Bombay city alone.	Significant growth in Madras alone.
23 Textile-Cotton	Significant growth in Ahmedabad, Bombay, Delhi, Kanpur, Madras, Nagpur.	No significant trend in any city.
27 Textile-Miscellaneous	Significant growth in Ahmedabad, Bombay, Calcutta, Delhi, Kanpur, Madras, Nagpur, Poona & Varansi.	No significant trend in any city.
28 Wood & Wood products	Significant growth in Calcutta, Delhi, Kanpur, Lucknow, Nagpur, Poona and Srinagar.	No significant trend in any city.
30 Printing & Publishing	Significant trend in Ahmedabad, Allahabad, G. Bombay, Calcutta, Delhi, Kanpur, Madras, Nagpur and Poona.	Significant growth in Allahabad alone.
31 Leather & Leather products	Significant growth in Agra and Kanpur only.	Significant decline in Allahabad alone.

33 Chemicals & products	Significant growth in Calcutta alone (over 1901-61) very recent trends more encouraging in a number of cities.	Significant growth in Poona only.
34-Non metallic mineral	Significant growth in Calcutta and Kanpur only.	No significant trend in any city.
35 Products		
36 Basic metals & products	Significant growth in Ahmedabad, Bombay, Calcutta, Nagpur, Srinagar and Varanasi.	No significant trend in any city.
38 Transport Equipment	Significant growth in Allahabad, Bombay, Calcutta, Lucknow & Madras.	No significant trend in any city.
39 Miscellaneous	Significant growth in Allahabad, Calcutta, Kanpur & Nagpur.	No significant trend in any city.
4 & Construction	Significant positive trend in Bombay, Kanpur, Madras & Poona only.	Significant trend in Bombay & Poona only.
40 Activities		
5 Electricity, gas, water supply	Significant growth in Allahabad, Bombay, Kanpur, Madras & Poona only.	Significant growth in Madras alone.
50 Electricity & gas	Significant growth in Allahabad, and Lucknow.	No significant trend in any city.
51 Water supply & sanitary services	Significant growth in Bombay & Madras only.	Significant growth in Madras only.
6 Trade & Commerce	Significant growth in all cities except in Agra, Srinagar & Varanasi where no trend is visible.	Significant growth in Bombay only. Significant decline in Lucknow only.
64-Retail Trade	Significant growth in all cities except in Allahabad, Agra, Srinagar & Varanasi.	Significant growth in Calcutta and Significant decline in Lucknow only.
68		
69 Trade & Commerce Miscellaneous	Significant growth in Ahmedabad, Allahabad, Bombay, Kanpur, Nagpur & Poona.	No significant trend in any city.
7 Transport Storage & Communication	Significant growth in Ahmedabad, Allahabad, Bombay, Delhi, Kanpur, Lucknow, Madras, Nagpur and Poona.	Significant growth in Calcutta, Delhi & Kanpur only.

TABLE 17—*Concl.*

Industrial Division & Major Group	Male Workforce Trends	Female Workforce Trends
70-Transport 71	Significant growth in all cities except in Calcutta, Delhi, Srinagar & Varanasi.	Significant growth in Kanpur only.
73 Communication	Significant growth in Ahmedabad, Allahabad, Bombay, Calcutta & Madras only.	Significant growth in Calcutta and Madras only.
8 Services	Significant growth in all cities except Varanasi.	Significant growth in Ahmedabad, Bombay, Calcutta, Kanpur, Madras, Nagpur, Poona & Srinagar.
80 Public Services	Significant growth in all cities except Delhi.	Significant growth in Bombay, Calcutta, Kanpur, Madras, Nagpur and Poona.
81 Educational & Scientific Services	Significant growth in all cities except Agra, Delhi, Nagpur, Srinagar, although recent trends are promising in these four cities also.	Significant growth in Allahabad, Bombay, Calcutta, Kanpur, Madras, Poona, Srinagar & Varanasi.
82 Medical & Health Services	Significant growth in all cities except Bombay, Calcutta, Poona, Nagpur & Varanasi.	Significant growth in Ahmedabad, Bombay, Calcutta, Kanpur, Madras and Nagpur.
84 Legal Services	Significant growth in Agra, Ahmedabad and Allahabad only.	No significant trend in any city.
85 Religious & Welfare Services	Significant growth in Kanpur city only.	Significant decline in Lucknow.
87 Recreational Services	Significant growth in Agra, Kanpur, Madras & Poona only.	Significant growth in Delhi only.
88 Personal Services	Significant growth in Ahmedabad, Bombay, Calcutta, Delhi, Madras, Nagpur, Kanpur, and Srinagar.	Significant growth in Ahmedabad, Allahabad & Bombay. Significant decline in Lucknow.

reader will have less difficulty in accepting the following tables of trends of worker participation rates for India as a whole.

The first table (Table 18) gives the proportions of (1) working force per 100 of total population 1901–71; (2) population in age group 15–59 per 100 of total population 1901–71; (3) of working force per 100 of total population in age group 15–59, 1901–71 for all India. It shows that the first ratio, that is, proportion of workers per 100 of total population for males reached its peak in 1911 (comparatively free from famines and pestilences such as 1901 was afflicted with), declined very little in 1921 in spite of the devastating influenza epidemic in 1919, registered a noticeable decline in 1931 consequent on the great Economic Crisis of 1928, sharply fell in 1951 but picked up in 1961 and fell again to an all time low proportion in 1971. The female ratio followed exactly the same general trends over the years 1901–71 but at a little less than half the male rates up to 1961. But in 1971 this ratio between female and male rates was severely disturbed and the female ratio plummeted to 11.87 in contrast to the male ratio of 52.51. The second ratio, which is demographic, is explained at once by the increase in the ratio of population 0–14 caused by the fall in infant and child mortality and the demographic gap which started after 1921 and the improved survival of population after age 59. The third ratio shows the effect of addition of child labour (0.14) and addition of workers above age 59 on to the working force in the age group 15–59 which pulled the male ratio above 100 in 1901, 1911, 1921, 1961, and 1971 and also demonstrates the marked fall in the female ratio after 1921, the most marked fall occurring in 1971.

TABLE 18
Percentage of (I) Working Force to Total Population, 1901–71; (II) Population in Age-Group 15–59 to Total Population, 1901–71; (III) Working Force to Population in Age-Group, 15–59, 1901–71: All India

Year	Sex	I	II	III
1901	Persons	46.61	59.03	79.95
	Males	61.11	58.93	103.68
	Females	31.70	59.14	53.60
1911	Persons	48.07	60.23	79.81
	Males	61.90	60.35	102.56
	Females	33.73	60.11	56.13
1921	Persons	46.92	59.64	78.65
	Males	60.52	59.84	101.13
	Females	32.67	59.44	54.96

TABLE 18—*Concl'd.*

Year	Sex	I	II	III
1931	Persons	43.30	60.19	71.95
	Males	58.27	60.59	96.17
	Females	27.63	59.77	46.23
1951	Persons	39.10	57.07	68.49
	Males	54.05	57.55	93.90
	Females	23.30	56.57	41.19
1961	Persons	42.98	54.41	78.99
	Males	57.12	54.77	104.28
	Females	27.96	54.03	51.74
1971	Persons	32.93	51.99	63.32
	Males	52.51	52.18	100.63
	Females	11.87	51.80	22.91

Note: (i) In 1951, the age-group is '15-64'

(ii) The estimates for 1961 have been based on the estimated strength of age-groups in Third Five Year Plan, P. 751.

Source: Census Reports 1901-1971.

The second table (Table 19) shows how little structural change has occurred in work participation among the various industrial sectors in the last 70 years, even after 1951, and how practically no transfer has occurred from agriculture to non-agriculture. On the contrary, if anything, a reconcentration has occurred in agriculture. It also shows how the primary sector has held firm, almost unchanged, providing the great bulk of employment. It also shows, distressingly enough, how little manufacturing, including household industry, has been gaining since 1901 despite the steady rise in industrial production, demonstrating that displacement of human labour has been occurring with rise in production along with a possible distortion in the production of wage goods. Construction, too, has held almost constant, while trade and commerce, also remaining almost constant, has witnessed substantial displacement of women workers since 1931. Transport, storage and communications have grown and been hospitable to increased employment for men and women. Services reached their peak for men in 1961 and women in 1951 but declined in 1971. There is a very definite suggestion that a relative contraction in non-agricultural employment occurred in 1971 to the proportionate gain of agricultural employment.

Is this stagnation or failure of transfer from agriculture to non-agriculture reflected in the indices of growth of work participation in the various sectors between 1901 and 1971? We can find some clues in Table 20 below. While population grew from an index of 100 in 1901 to 229.38 in 1971—46 points out of a total of 129 occurring in 1961-71 alone—population in the labour force grew from 100 to 206.

TABLE 19
Percentage Distribution of Workers in Each Sex by Industrial Categories, 1901-71: All India

		I	II	III	IV	V	VI	VII	VIII	IX	
		Total Workers (I–IX)	As Cul- tivor	As Agri- cultural Labourer	In Mining, Quarrying, Live- stock, Forestry, Fishing, Hunting & Plantations, Orchards & Allied Activities	At Household Industry	In Manu- facturing other than Household Industry	In Con- struction	In Trade and Commerce	In Trans- port, Sto- rage and Communi- cations	In Other Services
1901	P	100.00	50.64	16.89	4.33 (0.10)		11.73	0.78	6.05	1.12	8.46
	M	100.00	53.22	12.39	4.86 (0.10)		11.37	0.84	6.13	1.59	9.60
	F	100.00	45.54	25.81	3.23 (1.12)		12.46	0.67	5.89	0.21	6.19
1911	P	100.00	49.79	20.57	4.74 (0.24)		9.93	0.96	5.51	1.12	7.38
	M	100.00	53.22	15.28	5.41 (0.25)		9.62	1.10	5.55	1.61	8.21
	F	100.00	43.26	30.65	3.47 (0.24)		10.51	0.70	5.42	0.19	5.80
1921	P	100.00	54.39	17.40	4.48 (0.28)		9.29	0.84	5.73	0.94	6.93
	M	100.00	56.36	13.51	4.94 (0.27)		9.33	0.91	5.87	1.33	7.75
	F	100.00	50.57	24.95	3.57 (0.29)		9.20	0.72	5.46	0.17	5.36

TABLE 19—*Concl.*

			I	II	III	IV	V	VI	VII	VIII	IX
1931	P	100.00	45.04	24.79	5.18 (0.26)		8.91	1.04	5.59	1.03	8.42
	M	100.00	50.78	17.95	5.63 (0.28)		8.99	1.16	5.82	1.43	8.24
	F	100.00	32.39	39.89	4.19 (0.24)		8.73	0.77	5.09	0.13	8.81
1951	P	100.00	50.02	19.72	2.95 (0.57)	. .	9.00	1.05	5.24	1.53	10.49
	M	100.00	51.90	14.95	2.79 (0.56)	. .	9.84	1.19	6.21	2.04	11.08
	F	100.00	45.42	31.39	3.36 (0.60)	. .	6.94	0.72	2.85	0.30	9.02
1961	P	100.00	52.82	16.71	2.75	6.39	4.22	1.09	4.05	1.59	10.38
	M	100.00	51.46	13.42	3.10	5.71	5.56	1.41	5.29	2.28	11.77
	F	100.00	55.72	23.86	2.00	7.85	1.22	0.41	1.37	0.11	7.35
1971	P	100.00	43.37	26.31	2.89 (0.51)	3.52	5.94	1.23	5.56	2.44	8.74
	M	100.00	46.24	21.25	2.89 (0.54)	3.37	6.61	1.35	6.36	2.85	9.08
	F	100.00	29.69	50.40	2.89 (0.40)	4.25	2.76	0.65	1.78	0.47	7.11

Note: Figures in brackets under Industrial Category III represent "Mining and Quarrying".

Source: op. cit.

But 1961–71 registered a decline in the WPR index from 169.14 to 162.03 or a fall of 7.11 points. The index of workers grew from 100 in 1900 to 162 in 1971. One must remember here that the working force index also incorporates the working population in age group 0–14. The gap in employment, i.e. the relative difference between the labour force index and the working force index began to widen from 1931. From 10.5 points in 1931, it became nearly 18 in 1951. It was in 1961 that the gap closed altogether with a small surplus for good measure in the index of the working force to open the widest ever in 1971. Part of this dramatic change has been sought to be explained by the differences in the definitions and concept of workers and reference periods adopted in the 1961 and 1971 censuses, which must certainly have affected the indices of the female working force, if not of men. But that this could not have been the whole reason and that there was certainly a dramatic increase in unemployment during this period is borne out by the preliminary results of NSS 27th Round which will be discussed below. That there has been a sudden and spectacular swelling in the ranks of agricultural labourers between 1961–71 has borne the test of close scrutiny, when all allowance for changes in definitions and concepts between 1961 and 1971 has been made, although it is not very clear from which sources agricultural labour made its dramatic recruitment to swell its own ranks so suddenly. Preliminary investigations by A. K. Srimany in the ICSSR Project on Implications of Population Change at Jawaharlal Nehru University suggest that this recruitment occurred variously from (a) the component of growth of population of agricultural workers; (b) increase in agricultural enterprise as a result of agricultural inputs; (c) recruitment by displacement from the household industry and service sectors; and (d) slowing down of rural-urban migration during the decade. That causes (c) and (d) may have been partly responsible for what happened between 1961 and 1971 seems to be borne out by the steep decline in the index for IV + V manufacturing including household industry from 153 points in 1961 to 131 points in 1971 during which period the population increase index rose from 103 points to 229. More interesting, perhaps, is the fact that while the male index in IV + V rose from 173 in 1961 to 177 in 1971, the female index declined from 117 in 1961 to 47 in 1971. There was spectacular increase in the construction index during 1961–71 from 237 to 255 (males from 292 to 325) but an impressive decline in the female index from 98 to 82 in the same period. Similar but heightened patterns obtained in trade and commerce (VII). A notable fact is that the

index of women's participation fell dramatically from 100 in 1901 to as low as 54.71 in own cultivation (I) 75 in forestry, fishing, plantation (part of III), 47 in household industry and manufacturing, 82 in construction, as low as 25 in trade and commerce and 96 in the services in 1971: all this when the female population index rose from 100 to 224 and the female labour force (15–59) index rose from 100 to 200 during the same seventy year period (1901–71). The immense erosion of the female working force in these vital income and wealth producing sectors of the national economy can be well appreciated. The only sector which saw improvement in the women's participation index was transport, storage and communication, from 161 points in 1951, but down to 84 in 1961 but up again to 191 in 1971. But the absolute base of employment of women in this sector is small, having been only 76,670 women in 1901. The progress of the service index (IX) is intriguing. From 100 it dwindled to 87 in 1921 when there was an absolute decline in population owing to the influenza epidemic. When in 1931 India had turned the corner and was definitely on the course of the demographic gap, the index sharply rose to 100 in 1931, 157 in 1951, 207 in 1961 but fell to 167 in 1971. There is enough evidence to suggest, some of which is plain in the data for the 20 cities already presented, that much of this employment was the poverty-oriented service sector, that is, to cater to personal and other services that sheer population increase generates, particularly in the urban areas. The slowing of the rate of rural-urban migration and the growing economic distress during 1961–71 must have had their effect on the fall of the index which was spectacular in the case of women: from 189 in 1961 to 96 in 1971, that is, even below the 1901 level.

All this is summed up in the index for non-workers which rose steadily and faster than the population growth index from 1931 onwards. In 1931 the non-worker index was 124 when the population index was 117. In 1951 the two indices were 172 and 151 respectively; in 1961 196 and 183; in 1971 288 and 229. Thus the gap widened from 7 points in 1931 to 21 points in 1951, narrowed to 13 points in 1961 but widened again to 59 points in 1971. This is for total population. The corresponding male gap was 286 less 234 or 52 in 1971 and the female gap 289 less 200 or 89 in 1971. Had not the vocations of agricultural labour and mining and quarrying—both exceedingly arduous and exhausting for women—come to the rescue of women during 1961–71 the non-worker index for women in 1971 might have gone berserk. The import of this for health, procreation and longevity

must be appalling. This author in his Final Population Totals (Census of India Paper No. 1 of 1962, P. XXX) had made the following observation, which must apply even more pertinently after 1971:

This means that women in addition to the misery and risks of housekeeping and child-bearing take part to an overwhelming extent in production of low output, often involving heavy manual labour, which entails far greater fatigue, toil and unwholesome conditions of labour and longer hours of work than in the tertiary sector, where there is usually much less of sheer physical toil and fatigue. Could this be one of the important reasons for our dwindling female ratio in the general population?

Table 21 clinches the argument of dwindling female ratio in the sectors of employment and increasing female ratio in the sector of unemployment. Industrial Category I, however, suggests that definitional conundrums and male chauvinism may have had something to do with the low ratios in 1931, 1951 and 1971. Much research has gone into this and it is now fairly established that the real position even in 1971, if allowances were made for census definitions and legal rights, would still be on the trend line of 431, 427, 463 and 490 of 1901, 1911, 1921, and 1961. The ban on employment of women in underground mining from 1951 must have been partly responsible for the fall in the relevant index from 434 in 1951 to 155 in 1971. All the same, the decline in the Female/Male worker ratio in the Primary sector in 1971 is something which remains largely unexplained, particularly as the ratio did not greatly wilt between 1901 and 1961. Similar spectacular declines in the female ratio have occurred all across the board through the Secondary and Tertiary sectors after 1931, the most spectacular declines having occurred in industrial categories V, VI, VII and IX. The non-worker ratios, which were high during the famine-epidemic-endemic-economic crisis era of 1901–1931, came down appreciably in 1951 and 1961 but exceeded even the 1901 ratio of 1707 by attaining the figure of 1726. Corroboration that the figure may be just as high is available in NSS 27th Round.

The marked decline in the working status of men and women after 1921—the point of time at which the population of India entered the demographic gap—and the corresponding rise in men's and women's non-working status are illustrated in Table 22.

TABLE 20
Indices of Worker Participation by Sex
in Each Industrial Category and Indices of Non-Workers,
1901-71: All India (1901 = 100 in Each Item)

Year	Sex	Total population	Population in Labour Force age-groups (15-59)*	Total workers (I-IX)	As cultivator I	As agricultural labourer II	In Mining, Quar- rying, Livestock, Forestry, Fishing, Hunting & Planta- tions, Orchards & Allied Activities III
1	2	3	4	5	6	7	8
1911	P	105.62	107.75	108.94	107.10	132.71	119.70 (255.05)
	M	106.06	108.61	107.44	107.44	132.54	119.50 (278.68)
	F	105.17	106.89	111.94	106.32	132.87	120.28 (218.09)
1921	P	105.14	106.22	105.82	113.65	109.04	109.69 (279.88)
	M	106.06	107.69	105.04	111.24	114.58	106.71 (293.66)
	F	104.20	104.73	107.37	119.23	103.78	118.56 (258.29)
1931	P	116.57	118.84	108.30	96.33	158.97	129.97 (272.73)
	M	117.59	120.90	112.13	106.99	162.54	129.80 (320.34)
	F	115.52	116.75	100.69	71.63	155.58	130.47 (198.23)

At Household industry IV	In Manufacturing other than household industry V	In Cons- truction VI	In Trade and Commerce VII	In Transport, Storage and Communication VIII	In Other Services IX	Non- Workers X
9	10	11	12	13	14	15
	92.13	134.81	99.09	108.51	95.03	102.72
	90.89	141.26	97.23	108.86	91.86	103.90
	94.39	118.69	102.92	103.18	104.79	102.04
	83.77	114.55	100.21	88.31	86.71	104.55
	86.24	113.57	100.58	88.37	84.65	107.66
	79.30	116.98	99.44	87.48	93.06	102.73
	82.22	144.43	100.06	98.99	107.79	123.78
	88.67	155.19	106.41	101.27	96.24	126.16
	70.55	117.54	86.96	64.00	143.35	122.40

TABLE 20—*Concl.*

Year	Sex	Total population	Population in Labour Force age-groups (15-59)*	Total workers (I-IX)	As cultivator I	As agricultural labourer II	In Mining, Quarrying, Livestock, Forestry, Fishing, Hunting & Plantations, Orchards & Allied Activities III
1	2	3	4	5	6	7	8
1951	P	150.70	144.37	126.50	125.58	146.34	86.20 (684.97)
	M	152.71	147.74	135.16	132.34	161.71	77.24 (783.00)
	F	148.62	140.91	109.34	109.92	131.83	112.94 (531.60)
1961	P	183.40	169.00	169.14	176.38	167.36	107.92
	M	186.36	173.3	174.22	168.50	188.74	111.13
	F	180.37	164.7	159.08	194.66	147.15	98.34
1971	P	229.38	205.87	162.03	138.73	252.47	108.54 (792.58)
	M	234.39	211.99	201.41	174.98	345.59	119.74 (124.48)
	F	224.22	199.73	83.93	54.71	163.87	75.14 (273.27)

(i) Figures in brackets represent 'Mining and Quarrying'.

(ii) The figures of 1951 include Jammu and Kashmir figures. Rough estimates of workers and non-workers have been worked out for Jammu and Kashmir for 1951 by applying 1961 Census proportions of workers and non-workers in Jammu & Kashmir to the population of the State estimated in the Provisional Report of Population for 1961.

* Age-group for 1951 Census is (15-64)

At Household industry IV	In Manufacturing other than household- industry V	In Constr- uction VI	In Trade and Commerce VII	In Transport, Storage and Communication VIII	In Other Services IX	Non- Workers X
9	10	11	12	13	14	15
	96.96	170.23	108.89	171.66	156.57	171.82
	116.61	191.28	136.28	172.37	156.09	180.29
	61.40	117.65	52.38	160.77	158.04	166.86
	152.92†	237.04	113.33	239.94	207.40	195.86
	172.64†	292.75	150.32	250.09	213.45	205.43
	117.24†	97.88	37.04	84.45	188.78	190.25
	130.59†	255.92	148.94	351.79	167.34	288.18
	176.67†	325.44	208.89	362.31	190.37	286.21
	47.21†	82.23	25.28	190.58	96.46	289.33

† Including Category IV
(Source: op. cit.)

TABLE 20—*Concl'd.*

Year	Sex	Total population	Population in Labour Force age-groups (15-59)*	Total workers (I-IX)	As cultivator I	As agricultural labourer II	In Mining, Quarrying, Livestock, Forestry, Fishing, Hunting & Plantations, Orchards & Allied Activities III
1	2	3	4	5	6	7	8
1951	P	150.70	144.37	126.50	125.58	146.34	86.20 (684.97)
	M	152.71	147.74	135.16	132.34	161.71	77.24 (783.00)
	F	148.62	140.91	109.34	109.92	131.83	112.94 (531.60)
1961	P	183.40	169.00	169.14	176.38	167.36	107.92
	M	186.36	173.3	174.22	168.50	188.74	111.13
	F	180.37	164.7	159.08	194.66	147.15	98.34
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	M	234.39	211.99	201.41	174.98	345.59	119.74 (124.48)
	F	224.22	199.73	83.93	54.71	163.87	75.14 (273.27)

(i) Figures in brackets represent 'Mining and Quarrying'.

(ii) The figures of 1951 include Jammu and Kashmir figures. Rough estimates of workers and non-workers have been worked out for Jammu and Kashmir for 1951 by applying 1961 Census proportions of workers and non-workers in Jammu & Kashmir to the population of the State estimated in the Provisional Report of Population for 1961.

* Age-group for 1951 Census is (15-64)

At Household industry IV	In Manufacturing other than household- industry V	In Cons- truction VI	In Trade and Commerce VII	In Transport, Storage and Communication VIII	In Other Services IX	Non- Workers X
9	10	11	12	13	14	15
	96.96	170.23	108.89	171.66	156.57	171.82
	116.61	191.28	136.28	172.37	156.09	180.29
	61.40	117.65	52.38	160.77	158.04	166.86
	152.92†	237.04	113.33	239.94	207.40	195.86
	172.64†	292.75	150.32	250.09	213.45	205.43
	117.24†	97.88	37.04	84.45	188.78	190.25
	130.59†	255.92	148.94	351.79	167.34	288.18
	176.67†	325.44	208.89	362.31	190.37	286.21
	47.21†	82.23	25.28	190.58	96.46	289.33

† Including Category IV
(Source: op. cit.)

TABLE 21
Female per thousand of Males of Total Population, Workers
in each Industrial Category and Non-Workers, 1901–71: All India

WORKERS

Year	Popu- la- tion	Total work- ers (I— IX)	Primary Sector				Secondary Sector				Tertiary Sector				Non- Wor- kers	
			I	II	I + II	III	I + II + III	IV	V	VI	IV + V + VI	VII	VIII	IX	VII + VIII + IX	X
1901	972	504	431	1,051	548	335 (639)	534	. .	553	400	543	485	65	325	358	1,707
1911	964	525	427	1,054	567	337 (500)	550	. .	574	336	548	513	62	371	390	1,676
1921	955	516	463	952	557	372 (562)	545	. .	508	412	501	479	65	357	379	1,629
1931	955	453	289	1,006	476	337 (396)	466	. .	440	303	423	396	41	484	410	1,656
1951	947	408	357	857	469	491 (434)	470	. .	288	248	291	187	61	332	257	1,580
1961	941	460	498	819	565	297	552	633	110	134	348	119	22	287	210	1,581
1971	930	210	135	498	249	210 (155)	248	265	88	101	142	59	34	165	108	1,726

Note: Figures in brackets represent 'Mining and Quarrying'

Source: Census of India, Final Population Totals, 1961.

TABLE 22
Proportion of Non-Workers to Total Population of
each Sex (= 100), 1901-71: All India

Year	Proportion of total non-workers to total population	Proportion of male non-workers to total male population	Proportion of female non-workers to total female population
1901	53.39	38.89	68.30
1911	51.93	38.10	66.27
1921	53.08	39.48	67.33
1931	56.70	41.73	72.37
1951	60.90	45.95	76.70
1961	57.02	42.88	72.04
1971	67.07	47.49	88.13

Source: Op. cit.

The larger pattern of decline and the much smaller pattern of increase in women's employment in twenty large cities of India have been briefly summarised earlier in this Paper. In his article, 'Changes in Economic Activity of Males and Females in India 1911-61', to which reference has already been made, J. P. Ambannavar observes: "It is evident, thus, that urbanization has mostly been responsible for the comparatively greater decline in the crude worker rate for females. An answer to the question why urbanization in India has so far inhibited women's participation to economic activity may, therefore, throw some light on changes in the pattern and nature of economic activities during 1911-61." The only census years for which complete separate rural and urban employment figures are available on a comparable industrial classification basis are 1951 and 1961. This information is not available for previous years but the information for 1951 and 1961 and whatever is currently available for public use from the 1971 census on age group basis have been presented below. They do not seem particularly to corroborate Ambannavar's conclusion "that urbanization has mostly been responsible for the comparatively greater decline in the crude worker rate for females". On the contrary, as will be seen from the tables presented below, the decline has followed independent paths in rural and urban areas; in some cases the decline has been much sharper in rural areas than in urban areas. In other words, women in urban areas seem to have held fast to their well-earned crude ratios better than in rural areas. The age specific worker participation rates for females at certain ages

seem to be even better than for males in urban areas more than in rural areas.

Similarly, Ambannavar's other observation that "the failure of structural change in employment to accompany urbanization can be traced to the fact that the growth of modern industry in towns and cities dealt a death blow to the rural household industry. With changing technology and scale of production there was a shift in the location of industry from rural to urban centres, specially large metropolitan cities. These changes were unfavourable to women's participation in work. The trend in the employment pattern consequently differed between the sexes, as is evident from the following Table 3.' Table 3, reproduced below at Table 23, does not contain rural-urban distribution and so does not substantiate Ambannavar's last contention. As for the first thesis, the fact remains that little structural change has occurred either in the rural or the urban areas, and there has been no great differential or accelerated structural change in the urban areas either. The reasons behind "the death blow to the rural household industry"—to which should be added urban household industry—must be sought not only in the growth of modern industry in towns and cities but in the sagging of demand among the poorer sections of the community, wherever they are, whether in the rural or urban areas, accentuated by periods of scarcity and drought and, oddly enough, even by periods of bumper production when the fall in the prices of agricultural produce does not always make up for the greater amount of produce sold and the increase in the prices of inputs. These causes have perhaps been responsible in recent years for the erosion of staying power among the major lower deciles of the population in the urban as well as rural population and struck at both rural and urban household industry. For wherever there has been rural agricultural prosperity since 1951 as in Punjab and parts of Haryana, Rajasthan, Western Uttar Pradesh, parts of Gujarat, Karnataka, Tamil Nadu, Andhra and Kerala, there has been a resurgence in household and small scale industry in rural as much as in urban areas.

The real watershed is not rural-urban but agriculture-non-agriculture and Ambannavar's point is well taken when he observes: "During 1911-51 the number of female workers in the agricultural sector decreased by 2.5 million while that of the male workers increased by 6.4 million. During 1951-61 there was an increase in non-agricultural sector, amounting to 8.1 million for males but to only 1.5 million for females. The proportion of workers

TABLE 23
Trend in the Percentage Industrial Distribution of Male and Female
Working Force, India, 1911-1961

Industrial Division	MALE					FEMALE				
	1911	1921	1931	1951	1961	1911	1921	1931	1951	1961
0	74.31	75.30	74.99	72.99	72.69	78.10	79.86	79.83	83.73	86.32
1	0.24	0.26	0.26	0.48	0.57	0.23	0.28	0.23	0.27	0.28
2 & 3	9.36	9.04	8.72	9.75	10.15	10.04	8.72	8.29	7.73	8.18
4	1.08	0.94	1.12	1.20	1.40	0.69	0.69	0.74	0.60	0.41
5	0.46	0.44	0.40	0.42	0.37	0.77	0.72	0.76	0.54	0.27
6	5.42	5.68	5.61	6.21	5.31	5.22	5.20	4.84	2.85	1.38
7	1.57	1.25	1.38	2.03	2.29	0.17	0.16	0.12	0.29	0.11
8	7.55	7.08	7.52	6.92	7.21	4.79	4.38	5.11	3.98	3.05
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Number@	79002	77224	82477	98934	127569*	41358	39829	36303	40374	58758*

@ In thousands

* Excluding "persons employed before, now out of employment and seeking work."

N.B. For description of industrial divisions, please see Table 4.

(Source: J. P. Ambannavar, op. cit. Demography India 4(2) December 1975, Table 3, p. 351)

seem to be even better than for males in urban areas more than in rural areas.

Similarly, Ambannavar's other observation that "the failure of structural change in employment to accompany urbanization can be traced to the fact that the growth of modern industry in towns and cities dealt a death blow to the rural household industry. With changing technology and scale of production there was a shift in the location of industry from rural to urban centres, specially large metropolitan cities. These changes were unfavourable to women's participation in work. The trend in the employment pattern consequently differed between the sexes, as is evident from the following Table 3.' Table 3, reproduced below at Table 23, does not contain rural-urban distribution and so does not substantiate Ambannavar's last contention. As for the first thesis, the fact remains that little structural change has occurred either in the rural or the urban areas, and there has been no great differential or accelerated structural change in the urban areas either. The reasons behind "the death blow to the rural household industry"—to which should be added urban household industry—must be sought not only in the growth of modern industry in towns and cities but in the sagging of demand among the poorer sections of the community, wherever they are, whether in the rural or urban areas, accentuated by periods of scarcity and drought and, oddly enough, even by periods of bumper production when the fall in the prices of agricultural produce does not always make up for the greater amount of produce sold and the increase in the prices of inputs. These causes have perhaps been responsible in recent years for the erosion of staying power among the major lower deciles of the population in the urban as well as rural population and struck at both rural and urban household industry. For wherever there has been rural agricultural prosperity since 1951 as in Punjab and parts of Haryana, Rajasthan, Western Uttar Pradesh, parts of Gujarat, Karnataka, Tamil Nadu, Andhra and Kerala, there has been a resurgence in household and small scale industry in rural as much as in urban areas.

The real watershed is not rural-urban but agriculture-non-agriculture and Ambannavar's point is well taken when he observes: "During 1911-51 the number of female workers in the non-agricultural sector decreased by 2.5 million while that of the male workers increased by 6.4 million. During 1951-61 there was an increase in non-agricultural sector, amounting to 8.1 million for males but to only 1.5 million for females. The proportion of workers

TABLE 23
Trend in the Percentage Industrial Distribution of Male and Female
Working Force, India, 1911-1961

Industrial Division	MALE					FEMALE				
	1911	1921	1931	1951	1961	1911	1921	1931	1951	1961
0	74.31	75.30	74.99	72.99	72.69	78.10	79.86	79.83	83.73	86.32
1	0.24	0.26	0.26	0.48	0.57	0.23	0.28	0.23	0.27	0.28
2 & 3	9.36	9.04	8.72	9.75	10.15	10.04	8.72	8.29	7.73	8.18
4	1.08	0.94	1.12	1.20	1.40	0.69	0.69	0.74	0.60	0.41
5	0.46	0.44	0.40	0.42	0.37	0.77	0.72	0.76	0.54	0.27
6	5.42	5.68	5.61	6.21	5.31	5.22	5.20	4.84	2.85	1.38
7	1.57	1.25	1.38	2.03	2.29	0.17	0.16	0.12	0.29	0.11
8	7.55	7.08	7.52	6.92	7.21	4.79	4.38	5.11	3.98	3.05
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Number@	79002	77224	82477	98934	127569*	41358	39829	36303	40374	58758*

@ In thousands

* Excluding "persons employed before, now out of employment and seeking work."

N.B. For description of industrial divisions, please see Table 4.

(Source: J. P. Ambannavar, op. cit. Demography India 4(2) December 1975, Table 3, p. 351)

engaged in agriculture decreased somewhat for males but increased substantially for females. It would appear thus that agriculture has been the only expanding source of employment for females”.

(op. cit. p. 351)

Ambannavar divided manufacturing activities into two broad groups: the new and the old. The new group of industries consisted of the following:

New Group

Printing & Publishing
Rubber, Coal, Petroleum & their products
Transport equipment
Machinery
Electrical equipment

This new group of industries are capital intensive, located mainly in *urban areas or company towns* centred and run mainly on modern corporate principles. The progress in the number of total workers (both sexes) in these activities has been as follows:

Year	Number of workers (both sexes)	Women Workers
1911	87,000	12,000
1951	119,728	—
1961	1,486,000	83,000

The percentage of total workers in this block of industries to total workers employed in manufacturing rose from 0.8 in 1911 to 8.4 in 1961.

The second group of old industries was divided into three groups on the basis of trends in the size of employment where the total employment has (1) contracted in the long run, (2) contracted in the earlier decades but expanded later and (3) expanded in the long run.

As will be noticed, the above figures and those that will be quoted below from Ambannavar's paper have generally followed the trends of the twenty large cities of India discussed earlier. The two tables of Ambannavar will supplement the 1951 West Bengal Census Report findings and the findings for the twenty cities.

TABLE 24
Important Manufacturing Activities in which the Ratio of
Female to Male Workers has Shown Long Term
Decline, 1911-1961

Manufacturing Activities	Female Workers per 1000 Male Workers				
	1911	1921	1931	1951	1961
Processing of foodgrains	12075	7779	7065	1520	831
Bread and other bakery products	1644	1466	1662*	447	64
Production of vegetable oils	688	656	595	347	458
Nets, ropes, cordage, etc.	1962	1295	**	**	1236
Footwear and their repair	232	201	141	88	81
Earthenware and pottery making	572	540	490	402	507

* Excluding biscuit makers.

** comparable classification not available.

(J. P. Ambannavar, op. cit., Demography India 4(2) December 1975, p. 353)

TABLE 25
Important Manufacturing Activities in which the Ratio of
Female to Male Workers Contracted in the Early
Decades but Expanded Later, 1911-61

Manufacturing Activities	Female Workers per 1000 Male Workers				
	1911	1921	1931	1951	1961
Butter & other dairy products	961	1209	**	971	2013
Sweetmeats and condiments	278	234	282	623	672
Tobacco Products	436	576	470	556	612
Textile garments (i.e. Tailors)	531	447	292	137	140
Made-up textile goods*	1376	1974	**	**	2099
Structural clay products (Bricks etc.)	329	236	256	262	363
Textile & Textile products	618	603	507	431	576
Wood & Wood products	350	297	279	305	368

* Except wearing apparel, nets, ropes, cordage, etc.

** Comparable classification not available.

Source: J. P. Ambannavar, op. cit., Demography India 4(2) December 1975, p. 356.

Ambannavar has constructed another important table which is reproduced below (Table 26) and speaks for itself.

TABLE 26
Trends in the Percentage Share of Females in
Factory Employment, India, 1927-1967
 (Figures in thousand)

	1927*	1937*	1947@	1950@@	1956@@	1967@@
A. Total Workers	1432	1676	2275	2504	2885	3734
B. Female Workers	243	238	264	282	302	395
C. B as % of A	17.0	14.2	11.6	11.3	11.9	10.6

*Relates to British India.

@Relates to 9 Part A states and 3 Part C states (viz., Ajmer, Delhi and Coorg).

@@Relates to Indian Union.

Sources:

- (1) India, Labour Bureau, Ministry of Labour, Economic and Social Status of Women Workers in India, Publication No. 15, Delhi, 1953.
- (2) India, Labour Bureau and Planning Commission, Women in Employment (1901-1956), New Delhi, 1958, Pp. 16-28.
- (3) India, C. S. O., Statistical Abstract of India, 1970, New Delhi, 1972, Pp. 427-428.

As an explanation for the decline in the share of females in factory employment it has been stated: "Protective Laws, which regulate their time and hours of work and seek to provide amenities and social security for women workers, not only involve extra expenses but create difficulties in the employment of women. In the older factories the need for rationalisation and modernisation has arisen and it is contended that the retention of women in the alerted set-up is not always possible."

Source: J. P. Ambannavar, op. cit., Demography India 4(2) December 1975, P. 359

4. Changes in Participation Rates of Males and Females by Broad Age Groups (Mainly 1961 and 1971)

Before we go into a comparison of the results of 1961 and 1971, it will be useful to have some idea of participation sex-ratios in the major groups of the Indian Standard Industrial Classification (ISIC) as adopted in the Census of 1961. Tabulations by major groups of the ISIC are not available for the Census of 1971. An exercise undertaken by A. K. Srimany, L. P. Pathak and this writer under an ICSSR Project was confined to 1961. ISIC 1961 classified the industrial distribution of workers into 9 Divisions, 45 Major Groups and 343 Minor Groups. The study was confined to the behaviour of participation sex ratio in the 45 Major Groups which were in their turn classified into household and non-household activity sectors by rural and urban. The country was divided into five zones: Northern

(J & K, Punjab, Rajasthan, Delhi, Himachal Pradesh); Central (Uttar Pradesh and Madhya Pradesh); Eastern (Bihar, Orissa, West Bengal, Manipur, Tripura, Arunachal, Nagaland and Sikkim); Western (Gujarat, Maharashtra and Dadra & Nagar Haveli); Southern (Andhra Pradesh, Mysore, Kerala, Madras, Pondicherry, and Lakshadweep. The main conclusions emerged as follows:

The mean participation sex-ratio is quite low. In rural household industry it is not so unsatisfactory as in urban household industry. But in non-household industry, both in rural and urban areas, the mean sex ratios are alarmingly low. No less than about 50% (48% rural and 56% urban) of the major groups of household industries have sex ratios of less than 500 at all India level. In non-household industry, the maximum participation sex-ratio frequently (47% rural and 42% urban) occur in the low category V (50–249) and 94% for rural and 98% urban of the major groups of industries command sex ratios that fall in category IV (250–499) and below, that is, definitely less than 500. This is enough to illustrate the very low position women occupy in employment vis-a-vis men. It shows that women are in employment, wherever they are, mainly in very low earning sectors of the economy, demanding hard and drudge work in low skill and technology areas of low productivity. The range of skills is small and those major groups are uppermost in sex-ratio in which women can be employed for keeps as members of the household.

The zonal patterns of the distribution of mean sex-ratio are sufficiently clear. They show how almost the whole of northern India employs very low proportions of women. This larger half of the country is in sharp contrast with the smaller southern and south-western half of the country. The mean participation sex-ratios are highest in the southern and western zones in urban household industry and non-household industry rural and urban. The eastern and northern zones suffer from the lowest mean sex ratio in non-household industry rural and urban, while eastern and central occupy these positions in household industry urban. The zonal differences in household industry rural are not so articulate.

Between rural and urban areas, however, there are differences in the pattern. Educational and Scientific Services and Medical and Health Services occupy third and fourth places in urban areas while they appear way down at the twentyfifth and tenth positions in rural. Water Supply and Sanitary Services and Plantation Crops, however, appear as two of the top five in rural, underlining the noxious and arduous nature of the work to which women are pushed in higher proportions in rural areas.

These findings perhaps imply that education has more effect on women's employment in urban areas than in rural. The higher female participation rates in some of the traditional activities, however, are almost uniform in both rural and urban areas.

The average sex-ratio of workers in non-household industry is less than that in household industry. This confirms the common notion that economic activities at household level engage females in higher proportions than in non-household economic activity. This is a testimony to the low social and economic position of women, to their low literacy and technological levels, to the impediments in the way of development of skills, and to the social taboos against unescorted women going out to work.

The general patterns of ranking of major groups according to mean sex ratio in household and non-household industries are quite different. As has already been mentioned in the preceding discussion, the ranges of major groups are different for the two types of activities. Household industry has 25 major groups spread over Divisions 0, 1, 2, and 3, while non-household industry has 45 major groups ranging from Division 0 through Division 9. This is proof of the limited number of industries in which women participate to any significant degree. Activities enjoying higher rates of female participation in household industry are industries relating to different textiles, tobacco products or forestry and logging, which are characterised by high labour intensity and tediousness, less mobility, less skill, coupled with less remuneration.

The pattern of ranking of major groups of the top five as well as bottom five in mean sex ratio of workers in household industry in rural areas is almost the same as that in urban areas. The similarity in rural and urban areas may be due to the fact that, as mentioned above, household industry activities having higher female participation rate are characterised by less mobility, high labour intensity and other symptoms and this is true for rural as well as urban areas.

On the other hand, some of the major groups in non-household industry commanding higher rates of female participation are Water Supply and Sanitary Services, Educational and Scientific Services, Medical and Health Services and Other Services, which may be said to need more mobility, more skill and higher remuneration.

This marked difference in work participation for women in many major groups in household industry and several in non-household industry, where higher female participation is invariably characterised by high labour and low remuneration, may very possibly have undesirable impacts on society through first, high mortality rate of women (the continuous decline in sex ratio in the population since 1901 disturbing, to say the least) and second, through the motivation of increasing the family size to lessen the burden of economic struggle.

It will be rewarding to have a brief look at the work participation rates by broad age groups for males and females as are available from the Indian Census in 1961 and 1971. No attempt has been made to calibrate the crude ratios since there is practically no dependable reference against which they can be calibrated. So it was thought better to present uncured data rather than data which might get worse in the curing. Unfortunately, such data by broad age groups are available only for 1961 and 1971, only in the form and detail here presented and no more, but even for these two decades the divisions of age groups available for the crucial age bracket 15-59 are not identical. In 1961, this age bracket of 15-59 was divided into 15-34 and 35-59. In 1971 this age bracket is conveniently available in two groups 15-39 and 40-59. Even here it would be quite possible to isolate the population in age group 35-39 from the age returns and take it out from the group 15-39 and prefix it to the age group 40-59 to arrive at 35-59. But it would not be possible to find the work participation rate for this quinquennial group. The industrial categories are comparable, although on account of changes in definitions and concepts, the returns have conspicuously varied particularly in cultivators and agricultural labourers. In spite of these conundrums, two summary tables (Tables 28 and 29) have been prepared and presented for all they are worth. One is for rural, 1961 and 1971. The other is for urban, 1961 and 1971.

These tables present interesting variations. Let us first see what shifts have occurred in the highest work participation ratios among age groups in rural India between 1961-71

- (1) Older age group 35-59 or 40-59, which retained the highest work participation rates in rural India both in 1961 & 1971
 - Males — in total workers (combined categories), cultivation, household industry, trade and commerce
 - Females — in total workers (combined categories), cultivation, agricultural labour, trade and commerce.
- (2) Younger age group 15-34 or 15-39 which retained the highest WPRs in rural India both in 1961 and 1971
 - Males — agricultural labour, plantations, manufacturing, construction, other services
 - Females — plantations, household industry, manufacturing, construction
- (3) Industrial categories in which the highest WPRs moved from the younger age group in 1961 in favour of the older age group in 1971
 - Males — nil
 - Females — nil

- (4) Industrial categories in which the highest WPRs moved from the older age group in 1961 in favour of the younger age group in 1971

Males — transport

Females — other services.

The most noticeable change, of course, is the decline in WPRs in the rural areas from 68.57 for males and 37.23 per cent for females of the total rural population (excluding age group 0–4) in 1961 to 62.64 per cent for males and 15.45 per cent for females in 1971. The most noticeable decline occurred encouragingly in the age group 5–14 from 16.61 per cent for males in 1961 to 11.41 in 1971 and from 12.29 per cent for females in 1961 to 4.61 in 1971. We have used the word ‘encouragingly’ in the expectation that some of this decline is reflected in improved school enrolment in the primary and secondary stages, at least for males, although the difference in the female ratios cannot all be explained by improved school enrolment during the decade. On the other hand, it cannot but be a matter of concern that although the proportion of school enrolment improved between 1961 and 1951 the absolute number of children out of school in the age group 5–14 in the rural areas increased between 1961 and 1951. WPRs declined in every age group from 1961 to 1971 both for males and females and particularly sharply for females. The decline in the WPRs in the most important age span of 15–59 declined from 94 for males in 1961 to 89 in 1971 and from 51 for females in 1961 to 22 in 1971. The decline in the WPRs for females is most remarkable in the following categories.

TABLE 27
Decline in WPRs for Females in
Rural India aged 15–59, 1961–1971

	W.P.R. 1961	W.P.R. 1971
Cultivator	30.02	7.13
Agricultural Labour	12.60	11.80
Plantations etc.	0.92	0.58
Household Industry	3.42	0.77
Manufacturing	0.37	0.34
Construction	0.13	0.09
Trade & Commerce	0.51	0.22
Other Services	2.78	0.77

Only Transport improved slightly from 0.02 to 0.03.

The remarkable rural male WPR declines for age group 15–59 are from (i) 57.07 in 1961 in cultivation to 49.64 in 1971; (ii) from 4.95 in household industry to 2.86 in 1971; (iii) from 2.62 in plantation in 1961 to 2.32 in 1971; (iv) from 0.92 in construction in 1961 to 0.80 in 1971; and (v) from 7.93 in other services to 5.55 in 1971.

Improvements in rural male WPRs for age group 15–59 were noticed in (i) agricultural labour from 14.83 in 1961 to 22.29 in 1971; (ii) manufacturing from 1.97 in 1961 to 2.39 in 1971; (iii) trade and commerce from 2.61 in 1961 to 2.63 in 1971; and (iv) transport from 0.88 in 1961 to 0.99 in 1971.

Let us now look at the changes in WPRs in urban India from 1961 to 1971. Let us see what shifts have occurred in the highest WPRs among age groups in urban India between 1961 and 1971

- (1) Age group 60+ which retained the highest WPRs both in 1961 and 1971

Males — cultivation

- (2) Older age group 35–59 or 40–59 which retained the highest work participation rates in urban India both in 1961 and 1971

Males — total workers (categories combined), agricultural labour, plantation, household industry (age group 60+ comes a very close second), manufacturing, construction, trade & commerce, transport, other services.

Females — total workers (categories combined), cultivation, agricultural labour, plantation, household industry, manufacturing, construction, trade and commerce, transport, other services.

It will thus be seen that the older age group 35–59 or 40–59 in the urban areas—in contrast to several industrial categories in rural areas—retained its supremacy in WPRs in all categories yielding place to no category whatsoever to the younger age bracket (15–34 or 15–39) during 1961–71. In other words, in spite of the surge in population in the lower age bracket (15–34 or 15–39) during 1961–71 on account of acceleration in the rate of population growth since at least 1941, the lower working age bracket failed to overtop the older age bracket in WPRs in the decade 1961–71, the older age bracket (35–59 or 40–59) having comfortably retained its lead in every category. This is all the more remarkable on account of the fact that the age bracket considered in 1971 was 15–39 while the comparable bracket in 1961 was only 15–34. What is more, the still older age bracket 60+ was supreme in the industrial category, cultivation, both in 1961 and 1971. To put it briefly, the younger generation in the labour force failed to overtake in 1961–71 the lead

TABLE 28
Age-Sex Employment by Main Industrial Categories 1961 and 1971
All India/Rural

		WORKERS									
Age Groups		Total Population		Total Workers		I Culti- vators		II Agri. Labourers		III Plantation Workers	
		M	F	M	F	M	F	M	F	M	F
1971	All ages (0-4 excluded)	100	100	62.64	15.45	35.08	5.06	15.79	8.39	1.85	0.44
	5-14	100	100	11.41	4.61	4.84	1.28	4.59	2.64	1.14	0.25
	15-39	100	100	86.10	21.28	45.55	6.79	22.80	11.65	2.36	0.62
	40-59	100	100	96.72	22.80	58.47	7.96	21.18	12.16	2.22	0.51
	60 +	100	100	77.42	11.32	54.15	4.54	13.87	5.56	1.24	0.15
	15-59	100	100	89.46	21.73	49.64	7.13	22.29	11.80	2.32	0.58
1961	All ages (0-4 excluded)	100	100	68.57	37.23	41.89	21.92	10.81	9.24	2.23	0.73
	5-14	100	100	16.61	12.29	8.54	6.96	3.51	3.13	1.64	0.43
	15-34	100	100	91.13	49.78	53.34	29.38	15.80	12.51	2.71	0.98
	35-59	100	100	97.47	52.29	62.25	31.01	13.47	12.74	2.50	0.82
	60 +	100	100	79.89	24.31	58.37	14.33	8.04	5.71	1.42	0.27
	15-59	100	100	93.78	50.76	57.07	30.02	14.83	12.60	2.62	0.92

WORKERS

IV Household Industries		V Manufac- turing		VI Construct- tion		VII Trade & Commerce		VIII Transport		IX Other Services		X Non-Workers	
M	F	M	F	M	F	M	F	M	F	M	F	M	F
1.96	0.55	1.54	0.24	0.51	0.06	1.74	0.16	0.61	0.02	3.56	0.53	37.36	84.55
0.24	0.19	0.14	0.08	0.04	0.02	0.11	0.02	0.02	N	0.29	0.13	88.59	95.39
2.71	0.78	2.50	0.37	0.83	0.10	2.53	0.16	1.00	0.03	5.82	0.78	13.90	78.72
3.17	0.73	2.15	0.26	0.75	0.06	2.84	0.35	0.97	0.03	4.97	0.74	3.28	77.20
2.47	0.37	0.98	0.09	0.34	0.02	1.85	0.25	0.23	0.01	2.29	0.33	22.58	88.68
2.86	0.77	2.39	0.34	0.80	0.09	2.63	0.22	0.99	0.03	5.55	0.77	10.54	78.27
3.90	2.60	1.31	0.26	0.61	0.09	1.80	0.37	0.56	0.01	5.46	2.01	31.43	62.77
1.75	1.07	0.14	0.08	0.05	0.03	0.13	0.04	0.02	N	0.83	0.55	83.39	87.71
4.94	3.36	2.09	0.39	0.97	0.16	2.39	0.36	0.86	0.02	8.03	2.62	8.87	50.22
4.99	3.52	1.81	0.33	0.86	0.10	2.91	0.73	0.90	0.02	7.78	3.02	2.53	47.71
4.28	1.86	0.74	0.13	0.36	0.03	2.11	0.53	0.22	N	4.35	1.45	20.11	75.69
4.96	3.42	1.97	0.37	0.92	0.13	2.61	0.51	0.88	0.02	7.93	2.78	6.22	49.24

TABLE 29
Age-Sex Employment by Main Industrial Categories 1961 and 1971
All India/Urban

		WORKERS									
		Total Population		Total Workers		I Culti- vators		II Agri. Labourers		III Plantation Workers	
Age Groups		M	F	M	F	M	F	M	F	M	F
1971	All ages (0-4 excluded)	100	100	55.64	7.67	2.90	0.32	2.59	1.34	1.47	0.23
	5-14	100	100	4.09	1.23	0.26	0.04	0.51	0.28	0.20	0.04
	15-39	100	100	72.81	10.08	2.89	0.32	3.09	1.63	1.89	0.33
	40-59	100	100	92.50	13.78	5.61	0.76	4.25	2.63	2.45	0.37
	60 +	100	100	55.36	6.42	7.90	0.60	3.76	1.25	1.31	0.12
	15-59	100	100	78.24	11.01	3.64	0.43	3.41	1.89	2.04	0.34
1961	All ages (0-4 excluded)	100	100	60.13	13.01	3.34	1.57	1.33	1.37	1.48	0.36
	5-14	100	100	5.42	2.44	0.47	0.31	0.32	0.30	0.36	0.08
	15-34	100	100	76.92	15.79	3.27	1.83	1.61	1.70	1.78	0.48
	35-59	100	100	93.31	22.88	5.51	2.84	1.91	2.35	2.25	0.57
	60 +	100	100	58.44	11.41	8.94	1.61	1.67	1.06	1.44	0.20
	15-59	100	100	83.20	18.32	4.13	2.19	1.73	1.93	1.96	0.51

Status of Women:

WORKERS

IV Household Industries		V Manufac- turing		VI Construc- tion		VII Trade & Commerce		VIII Transport		IX Other Services		X Non Workers	
M	F	M	F	M	F	M	F	M	F	M	F	M	F
2.44	0.77	13.36	0.99	1.98	0.22	11.92	0.63	5.99	0.25	12.99	2.92	44.36	92.33
0.33	0.22	1.00	0.19	0.12	0.04	0.83	0.04	0.17	0.03	0.67	0.35	95.91	98.77
2.98	1.02	18.87	1.38	2.65	0.31	15.05	0.66	7.96	0.35	17.41	4.08	27.19	89.92
4.02	1.15	19.98	1.60	3.21	0.35	20.26	1.54	10.87	0.41	21.85	4.97	7.50	86.22
3.60	0.59	8.50	0.53	1.85	0.10	15.48	1.08	3.18	0.16	9.78	1.99	44.64	93.58
3.27	1.05	19.18	1.43	2.82	0.32	16.49	0.88	8.77	0.37	18.63	4.30	21.76	88.99
3.47	2.58	13.80	1.28	2.32	0.33	10.82	0.89	5.57	0.16	18.00	4.47	39.87	86.99
0.71	0.77	1.11	0.21	0.16	0.08	0.61	0.06	0.12	0.01	1.56	0.62	94.58	97.56
4.17	3.31	19.18	1.66	3.04	0.46	12.69	0.76	7.52	0.23	23.56	5.36	23.08	84.21
5.06	3.84	20.16	2.21	3.58	0.48	18.10	2.07	9.07	0.25	27.67	8.27	6.69	77.12
5.05	2.11	8.01	0.74	2.00	0.12	14.46	1.57	2.21	0.07	14.66	3.93	41.56	88.59
4.51	3.50	19.55	1.86	3.25	0.46	14.83	1.23	8.11	0.24	25.14	6.40	16.80	81.68

TABLE 30
Female Workers per 100 Male Workers in the Main Industrial Categories
Classified by Broad Age Groups: All India Rural, 1961 and 1971

	Age groups	Total Workers		I Culti- vators		II Agri. Labourers		III Plantation Workers		IV Household Industry	
		M	F	M	F	M	F	M	F	M	F
1971	All ages	100	23.25	100	13.58	100	50.10	100	22.67	100	26.54
	(0-4 excluded)										
	5-14	100	36.98	100	24.20	100	52.74	100	20.00	100	72.36
	15-39	100	24.51	100	14.77	100	50.68	100	25.87	100	28.63
	40-59	100	20.94	100	12.10	100	51.00	100	20.17	100	20.52
	60 +	100	13.67	100	7.85	100	37.44	100	11.54	100	13.83
	15-59	100	23.29	100	13.78	100	50.77	100	24.14	100	25.78
1961	All ages	100	51.99	100	50.10	100	81.84	100	31.22	100	63.77
	(0-4 excluded)										
	5-14	100	68.27	100	75.23	100	82.00	100	24.43	100	56.44
	15-34	100	55.49	100	55.93	100	80.41	100	36.93	100	69.16
	35-59	100	48.65	100	45.18	100	85.78	100	29.82	100	63.96
	60 +	100	30.54	100	24.64	100	71.22	100	19.13	100	43.65
	15-59	100	52.51	100	51.02	100	82.45	100	34.09	100	66.97

V Manufac- turing		VI Construc- tion		VII Trade & Commerce		VIII Transport		IX Other Services		X Non- Workers	
M	F	M	F	M	F	M	F	M	F	M	F
100	14.69	100	10.84	100	8.46	100	3.33	100	14.00	100	213.35
100	52.25	100	45.69	100	12.12	100	23.55	100	41.17	100	98.53
100	14.87	100	11.39	100	6.40	100	3.39	100	13.30	100	561.42
100	10.87	100	7.44	100	11.06	100	2.54	100	13.11	100	2090.16
100	8.77	100	5.00	100	12.76	100	3.66	100	13.43	100	367.09
100	13.73	100	10.22	100	7.99	100	3.13	100	13.25	100	711.97
100	19.33	100	14.96	100	19.52	100	1.93	100	35.25	100	191.75
100	49.84	100	54.62	100	28.98	100	11.28	100	61.38	100	97.04
100	19.23	100	16.41	100	15.42	100	2.11	100	33.12	100	574.83
100	16.68	100	10.54	100	22.57	100	1.48	100	35.20	100	1708.90
100	18.11	100	6.58	100	25.41	100	1.61	100	33.52	100	377.98
100	18.25	100	14.12	100	18.76	100	1.84	100	33.98	100	768.23

TABLE 31
Female Workers per 100 Male Workers in the Main Industrial Categories Classified by
Broad Age Groups: All India Urban 1961-1971

	Age Groups	Total Workers		I Culti- vators		II Agri- Labourers		III Plantation Workers		IV Household Industry	
		M	F	M	F	M	F	M	F	M	F
1971	All ages	100	11.62	100	9.32	100	43.67	100	13.34	100	26.40
	5-14	100	27.63	100	14.21	100	49.83	100	18.42	100	61.86
	15-39	100	11.44	100	9.21	100	43.70	100	14.52	100	28.19
	40-59	100	10.98	100	9.95	100	45.56	100	11.06	100	21.18
	60 +	100	11.05	100	7.30	100	31.71	100	8.55	100	15.57
	ANS	100	8.43	100	12.82	100	72.52	100	25.74	100	44.73
	15-59	100	11.29	100	9.53	100	44.34	100	13.38	100	25.82
1961	All ages	100	17.89	100	38.88	100	85.62	100	20.06	100	61.33
	5-14	100	41.09	100	59.34	100	85.93	100	19.43	100	99.16
	15-34	100	16.70	100	45.45	100	85.64	100	22.14	100	64.59
	35-59	100	17.84	100	37.51	100	89.57	100	18.33	100	55.27
	60 +	100	19.09	100	17.61	100	62.36	100	13.66	100	40.81
	ANS	100	20.14	100	28.16	100	100	100	17.33	100	78.51
	15-59	100	17.19	100	41.39	100	87.30	100	20.47	100	60.59

V Manufac- turing		VI Construc- tion		VII Trade & Commerce		VIII Transport		IX Other Services		X Non- Workers	
M	F	M	F	M	F	M	F	M	F	M	F
100	6.24	100	9.41	100	4.46	100	3.47	100	18.99	100	175.59
100	17.58	100	34.73	100	4.08	100	13.97	100	48.48	100	94.56
100	6.03	100	9.63	100	3.63	100	3.64	100	19.35	100	273.53
100	5.89	100	8.11	100	5.59	100	2.78	100	16.77	100	846.73
100	5.94	100	5.34	100	6.65	100	4.74	100	19.35	100	199.80
100	19.38	100	10.19	100	20.12	100	8.50	100	3.96	100	112.60
100	5.99	100	9.15	100	4.30	100	3.35	100	18.51	100	328.00
100	7.70	100	11.59	100	6.78	100	2.35	100	20.53	100	180.45
100	17.72	100	45.68	100	9.00	100	10.12	100	36.23	100	93.92
100	7.07	100	12.23	100	4.82	100	2.46	100	18.51	100	296.77
100	7.97	100	9.64	100	8.33	100	2.04	100	21.75	100	838.98
100	8.96	100	6.00	100	10.60	100	3.20	100	26.20	100	208.29
100	13.85	100	15.13	100	11.41	100	5.24	100	18.24	100	114.91
100	7.42	100	11.14	100	6.46	100	2.28	100	19.88	100	379.37

enjoyed by the older generation in the labour force. In short, WPRs and employment did not keep pace at all with the growth rate of population in the younger generation of the labour force in urban areas during 1961–71. Or in other words, it may be fairly safe to conclude that employment for the younger generation of males and females differently declined in urban India during 1961–71. This is very different from the corresponding picture for rural India for the same period.

Another set of two tables (Tables 30 and 31) has been constructed which shows the ratio of female workers per 100 male workers in the main industrial categories for all India, rural and urban, 1961 and 1971. This immediately establishes the reason for low literacy among women, low school enrolment in the age group 5–14, the high wastage and drop out rates for girls in primary and secondary schools in India. The reason is the high engagement ratio of girls in this age group—the ratio of female workers to male workers is by far and away the highest in the age group 5–14 of all other age groups, —in all industrial categories in the rural areas. The next most favoured age group in rural areas is 15–34 or 15–39 except for the very arduous work of agricultural labour where the higher age group 35–59 or 40–59 is favoured. This picture is repeated for the urban areas as well except that in trade and commerce alone the ratio in 5–14 gave way to the corresponding rates for age group 40–59 and 60+ in 1971 and age group 60+ in 1961.

On the other hand, the progress of ratios of non-working females to non-working males in each broad age group is also remarkable. In rural India this ratio for all ages including 0–4 moved up from 191 in 1961 to 213 in 1971. The ratio was lowest for the age group 5–14 of all age groups both in 1961 (97%) and 1971 (99%), indicating thereby that female children in the age group 5–14 are more put to work than male children. In this age group, female children in rural areas are put in considerable numbers to work in the arduous avocations of cultivation, agricultural labour, household industry, manufacturing, construction and other services. Male and female children under 14 are debarred by law from working in plantations and mining and in certain manufacturing industries, which explains the low ratios (under 50 per cent) for female children in these categories, although in reality a higher proportion of female children may actually be in employment even in these categories. The ratio of non-working females to non-working males rises steeply in the age group 15–34 in 1961 (575) and in the age group 15–39 in 1971 (561). But the highest

figures are reached in the rural areas in the age group 35–39 or 40–59 for both 1961 (1709) and 1971 (2090). This suggests that the span of working life for females is more limited to the age group 5–34 or 5–39 and contracts sharply and remarkably in the higher age bracket of 35–59 or 40–59 of the working force age of 15–59.

Here again, there are interesting but distressing variations on which we have commented in brief already. For instance, let us look at the following abstract. The Age Brackets are A: 5–14; B: 15–34 for 1961, 15–39 for 1971; C: 35–59 for 1961, 40–59 for 1971; D: 15–59.

Industrial Category	Age Bracket	Female Workers per 100 Workers in Rural India	
		1961	1971
Total Workers	A	68.27	36.98
	B	55.49	24.51
	C	48.65	20.94
	D	52.51	23.29
Cultivator	A	75.23	24.20
	B	55.93	14.77
	C	45.18	12.10
	D	51.02	13.78
Agricultural labour	A	82.00	52.74
	B	80.41	50.68
	C	85.78	51.00
	D	82.45	50.77
Plantations	A	24.43	20.00
	B	36.93	25.87
	C	29.82	20.17
	D	34.09	24.14
Household Industry	A	56.44	72.36
	B	69.16	28.63
	C	63.96	20.52
	D	43.65	13.83
Manufacturing	A	49.84	52.25
	B	19.23	14.87
	C	16.68	10.87
	D	18.25	13.73
Construction	A	54.62	45.69
	B	16.41	11.39
	C	10.54	7.44
	D	14.12	10.22

Other services	A	61.38	41.17
	B	33.12	13.30
	C	35.20	13.11
	D	33.98	13.25

Neither Trade or Commerce nor Transport has a ratio of 50 or more in any age group.

The important thing to note is the sharp decline in the ratio from 5-14 to 15-34 or 15-39 and again from 15-34 or 15-39 to 35-59 or 40-59 in cultivation, household industry, manufacturing and construction. This is also noticeable in transport. This means that engagement of women in these sectors is comparatively very shortlived which allows of little build-up of skill and technology in the individual from young age to old. This may lead to two or more consequences. First, the higher mortality among females in the younger age groups and the processes of child bearing and child rearing which progressively remove women from work in these sectors. Thus valuable manpower in the stage of acquiring skills is prematurely lost to the nation, lowering productivity in the aggregate. Second, the lack of opportunity permitted and the inability of women in these sectors to hold their own against men in physical strength, skill and technology with advancing age which means that even in these sectors women are progressively relegated to the blind alley or close ended jobs without much prospect of advancement with rise in age. A third possible consequence is the continuing apathy and neglect to invest in training and attention to build up technical skill, technology and continuity among women workers as they grow older which explains the extra-ordinary paucity of women among service trainees in any industrial sector, the general attitude being that it is wasteful and does not pay to invest in training of women workers especially in the rural areas of India. In short, manpower is still either largely unutilized or imprudently utilized in rural India.

An exception to the general picture carries distressing implications. This is the sector of agricultural labour where the ratio rises from the younger adult age group to the older. Understandably enough, it is only in household industry that the ratio is equably maintained through advancing age groups. The most hopeful sector seems to be other services where the ratio rose from age group 15-39 to 35-59 in 1961 but fell slightly from age group 15-39 to 40-59 in 1971. This sector suggests that at least a proportion of women workers may be progressively doing well and expanding their sphere of economic activity.

The same pattern and trends are broadly repeated for urban area except for the following departures:

Industrial Category	Age Bracket	Women Workers Per 100 Male Workers in Urban India	
		1961	1971
Total Workers	A	41.09	27.63
	B	16.70	11.44
	C	17.84	10.98
	D	17.19	11.29
Manufacturing	A	17.72	17.58
	B	7.07	6.03
	C	7.97	5.89
	D	7.42	5.99

Thus even in the urban areas the healthy trend toward a higher ratio of women participants per 100 male participants in the higher adult age groups noticed in 1961 suffered a setback in 1971. One encouraging feature worthy of note is the much smaller ratios of non-working females to non-working males in all age groups in the urban areas compared to those in rural areas.

The following table will serve to drive home the vulnerable dependent status of women in the crucial age groups in 1961 and 1971.

TABLE 32

Proportion (1) of Total Non-Workers per 1000 of Total Workers and (2) of Dependent Females per 1000 Dependent Males in Broad Age Groups for All India 1971 and 1961

Age Group	Rural		Urban	
	Total non-workers per 1000 of workers	Dependent females per 1000 dependent males	Total non-workers per 1000 of workers	Dependent females per 1000 dependent males
1971				
All ages (incl. 0-4)	1957	1771	2409	1566
All ages (excl. 0-4)	1516	2134	1969	1756
5-14	11256	985	35725	946
15-39	858	5614	1251	2735

TABLE 32—*Concl'd.*

Age Group	Rural		Urban	
	Total non-workers per 1000 of workers	Dependent females per 1000 dependent males	Total non-workers per 1000 of workers	Dependent females per 1000 dependent males
40-59	614	20901	692	8467
15-59	776	7120	1070	3280
60 +	1199	3671	2177	1998
1961				
All ages (incl. 0-4)	1219	1582	1987	1579
All ages (excl. 0-4)	8781	1912	1577	1805
5-14	5878	970	23993	939
15-34	423	5748	1020	2968
35-59	316	17089	571	8390
15-59	377	7682	826	3793
60 +	922	3780	1840	2083

But this table also suggests, as has been suggested in passing above, as being a little contrary to Ambannavar's contention that urbanisation reduces the employment of women, that women's employment is not as vulnerable in the urban areas as is generally imagined. In this context, one must remember the smaller proportion of females to males in urban populations, a fact which generally improves the urban ratios in the above table, but all the same female dependency in urban areas per 1000 of male dependency compares favourably with rural areas.

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