

Female Work Participation in Uttar Pradesh: Trends and Determinants

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Introduction

Labour is an essential factor of production that contributes to development and variation in its quality as well as quantity affects specialization and division of labour and markets for goods and services. The utilization of labour force mainly depends on the supply and demand for labour. The total number of workers in labour supply is highly affected by the behaviour of the better half group particularly women with their dual responsibilities of home maker and worker. Using employment data from quinquennial rounds of the National Sample Survey (NSS), a number of papers/reports have examined the employment situation in India in the post-reform period in comparison with that in the pre-reform period (Sundaram, 2001a, 2001b; Chadha and Sahu, 2002; Government of India, 2002; Sundaram and Tendulkar, 2002; Dev, 2002; Chadha, 2003; Sundaram and Tendulkar, 2004; Sundaram, 2004; and Bhattacharya and Sakthivel, 2005a, 2005b). A major conclusion that one may draw from these studies is that there has been a marked slowdown in employment growth in India in the post-reform period compared to the pre-reform period, and that this slowdown has been relatively more marked in the case of female employment and that too in rural areas.

For the employment estimates based on usual principal and subsidiary status, there is virtually no increase in female employment in rural areas at the all-India level. This is corroborated by estimates presented in some other papers. The estimates of rural female employment based on usual principal and subsidiary status presented in Sundaram (2001b) are 104.3 million and 104.1 million for 1993-94 and 1999-00 respectively, thus indicating a marginal decline in rural female employment between the two years. The employment estimates presented in Sundaram and Tendulkar (2004) indicate a marginal increase from 104.7 to 105.1 million between 1993-94 and 1999-00. This is the story that pertains to national scenario but what about the situation at the state level and for this- micro, inter- district analysis is required. This paper proceeds with the objective of studying trends of female participation and marking its determinants at the district level for the State of Uttar Pradesh and for inter-district analysis we will have to look forward to the Census data which is provided by the Registrar General of India. The main objective of this paper is to analyse female employment scenario across districts of Uttar Pradesh and to find out its determinants. The study proposes to investigate keeping in view the existing literature:

- To understand the level and nature of female labour activity at the district level in Uttar Pradesh.

- To investigate the nature and extent of total and education specific FWPR in rural and urban areas.
- Identify and explain various demographic and socio-economic factors responsible for the observed levels and changing patterns of female workforce participation rate across the state.

Data & Methodolgy

The study will be based on secondary data. The two main sources of data on population and workforce are the decennial population Census and the National Sample Survey Organisation. Of the two sources Census of India will be used as the NSSO data do not provide information at the district level. Whereas data pertaining to sex ratio, literacy and urbanization will be culled from Primary Census Abstract and Socio-cultural Tables will be utilized for data related to marital status, SC and ST population and religion wise distribution of women. The data pertaining to various indicators has been taken from Statistical Diary of Uttar Pradesh, 2001.

The coefficient of variation has been computed to bring about the extent of inter district variation in RFWPR. The inter-district inequalities in the real employment status of rural/ urban females will be shown by the coefficient of equality. In all economic, demographic and socio-cultural variables, which are understood to influence, FWPR are incorporated in the study.

Overview of Literature

Economic literature abound with studies which reveal that the structural changes in the Indian economy, has set in motion a transitory force within the economic system of the country. Uttar Pradesh had not been immune to such forces. Much of these changes is believed to have profound implications for the levels and nature of employment particularly for the women. In such a setting this paper broadly aimed to take a fresh look at the current situation of women's work in Uttar Pradesh, primarily on the basis of data provided by the Census of India. We aimed to examine the issues and understand the linkages underlying the recent trends in female work participation and identify the possible determinants of the observed situation.

Women's independence by and large depends on their *economic* independence, which is determined by whether they have paid employment. A few studies have argued that, apart from letting women have more independence, increasing levels of female employment tend to result in women having greater influence on family decisions. Thus, female labour participation is a very important aspect of women's relative economic status (see Standing, 1978; Heer, 1963; Schultz, 1990; Boserup, 1970).

Debate regarding the problem of women's subordination and importance of her economic role always led to stress on the importance of FWPR in economic activity for the development of a nation. Women are vital and productive agents in Indian economy, even as studies point towards 'statistical purdah' (World Bank: 1991) or 'economic invisibility' (Radha Devi: 1990) manifest in selective under-documentation of their endeavour, in a society with strong traits of patriarchal norms. In India the labour force is largely masculine, with only one out of every four workers being a female (RGI: 2002).

Using a cross-country dataset and microdata from India and Thailand, **Mammen and Paxson (2000)** show how women's work status changes with economic development. Several clear patterns emerge: women's labor force participation first declines and then rises with development; women move from work in family enterprises to work as paid employees; fertility declines; and gender gaps in education narrow. Women's education levels, and those of their spouses, appear to be important determinants of women's labor market activities. Broad welfare indicators, such as mortality rates and education levels, indicate that women's well-being improves on average with development, both in absolute terms and relative to men.

Dev (2004) examines in his study on female work participation and child labour rates using occupational data from NFHS and compares this data with the 2001 Census and NSS data. Attempts are made to identify the determinants of both female work participation and child labour. It is found that the larger the size of the family, the lower is the ability of a woman to participate in economic activity. His analysis on logistic regressions indicates that large size of family is expected to reduce WPRs for females. In rural areas, schooling showed a negative relationship with WPRs for females while land size has a positive relationship with WPRs. As compared to the low standard of living category, females belonging to the medium and high standard of living categories are less likely to participate in economic activities.

Some researchers have examined the causes for low participation of women in the labour market (Bardhan, 1977, Jose 1989, Sundaram 1989). The macro level analysis on female participation and child labour used data from Census and National Sample Surveys (NSS). Population Census, conducted once in 10 years and the quinquennial sample surveys of National Sample Survey Organisation (NSSO) on Employment and Unemployment are the two main sources of data on work participation in the country. These two sources also provide workforce data by age distribution, and from this one can obtain information on adult work participation and the incidence of child labour.

Several studies have attempted to identify some of the possible determinants of female work participation in India (Gulati, 1975; Sen, 1986; Dholakia and Dholakia, 1978; Tuteja, 2000). In context of Uttar Pradesh, what could be the possible determinants of female employment is the question that needs attention. There have been very few studies aimed at examining various dimensions of women's work in Uttar Pradesh (Sen, 1986). Within India, the state of Uttar Pradesh has carved out a separate niche for itself in development discourse due to its lagging performance over the years. Much has been written about UP's low level of female literacy, political achievement regarding decentralized governance and commitment towards social welfare, high levels of life expectancy, low infant mortality and cohesive social structure. However it is certainly paradoxical that, in such a society well acknowledged for low participation of the women in the labour force and that too has been consistently on a decline. Such a paradox deserves close scrutiny.

Conceptual Background

In an economy like India both economic and socio-cultural factors determine the level of female employment. Several studies have suggested and identified some of the possible determinants of female participation in India (Gulati, 1975; Sen, 1986; Dholakia and Dholakia, 1978). The female participation in economic activity besides increasing total participation and output has other important implications; it tells us about the condition of women, about caste and class disparities in society; about the poverty and about the impact of government programmes. They are indeed a silent critique of the nature of the growth process and the development paradigm. As established by various studies female participation in economic activity firstly tends to reduce fertility and population growth, thereby raising per capita income and consumption. Secondly women participation will result in their greater access to educational opportunities. Generally, education and training have largely been restricted to males, discriminating females with the assumption that investment on their education and training has a relatively low social and private return. As a consequence, low women's economic activity. Realisation of the fact that women can gainfully participate in economic activity will result in their greater access to education and training was a bit late. Furthermore, benefits of education and economic activity would result in a better quality of young generation. Females are still expected to be informal educators, which the educated females can better fulfill. FWPR affects the structure and operation of labour market. It is often argued that in low-income countries with excess labour supply female employment would reduce employment available to males.

A wide number of factors influence the female participation in economic activities. This study test some of these factors under three broad headings like economic, demographic and socio-cultural factors. Certain economic indicators influencing the demand and supply of workers are important in determining the pattern and extent of women activity rate in the State. Demand is determined by the availability of jobs for women and supply by the economic needs of the family. Agriculture being the main activity dominating rural areas employs bulk of rural women workers and thus consequently most of the indicators selected for rural areas are related to agriculture. Selection of indicators is based on the idea that socio-cultural, demographic and economic activities influence women being a part of the society. As Reddy points out“ Inter-regional variations in female activity rate are firmly rooted in differences in agriculture factors. Any adequate variation in female participation rate should be viewed from the root cause of the problem”.

Number of manufacturing and processing establishments will be taken as an indicator of number of industrial units. These establishments per 1000 of women workers shows upto some extent the employment opportunities available to women and their impact on FWPR. Sectoral distribution of women workers in primary, secondary and tertiary activities in urban and rural areas determine the type of work available to women and its impact on total female's economic activity.

Growth of agriculture output in rural areas over the period is taken as a proxy for higher income (Income growth). And as women are expected to work for supplementing income there participation rates may be affected negatively with increased agricultural output. Cropping intensity and index of agriculture modernization determined the demand for labour. These factors together increase the labour demand but render the agriculture male selective as these new techniques are generally literacy and skill oriented and therefore reduce the female participation rate. Concentration of holdings is also expected to determine the demand for labour but its impact is expected to be different for female cultivators and female agricultural labourers.

Demographic variables selected are sex ratio and child-women ratio. Sex Ratio determines the availability of women workers in a region and therefore, the total female employment in a region. Child-women ratio is choosen to look at the impact of children on women's non-domestic work.

Socio cultural variables considered are literacy and presence of SC population. Literacy is one of the important socio-cultural variables affecting the extent and nature of women's gainful employment. A higher level of literacy is expected to have a negative impact on female employment as literacy raises the expectation of women about jobs. Marital status (child women ratio) often compels the women either to enter or withdraw from the economically active work-force.

Female Workforce Participation in U.P: Levels and Patterns

Variation in female participation rates is one of the significant features of Indian economy. It is quiet apparent that the participation rate of rural women are much higher than the participation rate of urban women be it national level or at the state level. Factors that shape this pattern in rural areas can be discussed as follows. The rural women are mostly engaged in agriculture or in household industries where household duties /chores are very easily translated with economic activity. Also this does not require any special education and training as required for females workers in urban areas. Besides this the family generally is such that eldest females in the family generally look after the young ones. All these factors combines to raise the FWPR in rural areas while in urban areas the reverse happens and FWPR are pushed down.

For making the comparison over decades comfortable we have added/ subtracted Uttaranchal from Uttar Pradesh as and where required. The picture which emerged thus is shown in Table 1. Table shows that in 1981 the WPRs for males and females for Uttar Pradesh were much higher as compared to those in 1991 and 2001. We can easily configure that total workers increased over the period but the category of main workers registered a decline in rural Uttar Pradesh whether males or females. The category of marginal worker has found influx of numbers during the two decades under consideration.

In 1991 it was felt that some persons especially were engaged in unpaid work on farms or in family enterprises. It was therefore decided to include unpaid work on farm and in the family enterprises as 'work' in 1991 census. Thus work was defined as 'participation' in any economic activity which may be physical or mental. It also includes supervision and unpaid work on the farm or in family enterprise. Despite this work participation rate for males declined marginally. Between 1981 and 1991 the female work participation rates in rural Uttar Pradesh showed an increase of 5.12 percent points. The percentage of female main workers has improved by 2.46 percent points while the percentage of marginal workers increased by 2.66 percent points i.e. more than the main workers. In the decade 1991-2001 we find that the proportion of female workers (total) registered increase of 4.76 percent points. The category of main workers increased by 10.56 percent points while the marginal workers increased by 6.52 percent points thus registering an increase in the category of rural female workers. In spite, of all elaborate arrangements to net all the workers under the Census, yet this increase of female workers in the category of marginal workers focus on the secondary status of females as workers.

Table 1: Percentage of Workers in Uttar Pradesh

Category		Total workers			Main workers			Marginal workers		
		Persons	Males	Females	Persons	Males	Females	Persons	Males	Females
1981	Total	30.72	50.76	8.07	29.23	50.31	5.40	1.49	0.45	2.67
	Rural	31.46	51.49	9.04	27.71	50.98	5.90	1.75	0.51	3.14
	Urban	27.29	47.46	3.46	26.99	47.30	2.99	0.30	0.16	0.47
1991	Total	32.20	49.68	12.32	29.73	49.31	7.45	2.47	0.37	4.87
	Rural	33.46	50.51	14.16	30.52	50.10	8.36	2.94	0.41	5.80
	Urban	27.14	46.37	4.78	26.57	46.19	3.75	0.57	0.18	1.03
2001	Total	32.70	46.77	17.08	32.34	46.82	16.28	8.90	7.71	10.21
	Rural	34.19	47.31	19.75	33.78	47.29	18.92	10.36	8.57	12.32
	Urban	27.08	44.77	6.85	26.94	45.08	6.20	3.41	4.52	2.14
Change in Percent point 1991-81	Total	1.48	-1.08	4.25	0.50	-1.00	2.05	0.98	-0.08	2.20
	Rural	2.00	-0.98	5.12	2.81	-0.88	2.46	1.19	-0.10	2.66
Change in Percent point 2001-1991	Urban	-0.15	-1.09	1.32	-0.42	-1.11	0.76	0.27	0.02	0.56
	Total	0.50	-2.91	4.76	2.61	-2.49	8.83	6.43	7.34	5.34
	Rural	0.73	-3.20	5.59	3.26	-2.81	10.56	7.42	8.16	6.52
	Urban	-0.06	-1.60	2.07	0.37	-1.11	2.45	2.84	4.34	1.11

Source: Census of India, 1991, series I Final Population Totals, Brief Analysis of Primary Census Abstract Paper 2 of 1992. Census of India, 2001, series I, Primary Census Abstract, Total Population: Table A-5.
Note: Uttaranchal included in 2001 for comparison.

Table 2 above highlights the issue of structure of female workforce in Uttar Pradesh. We find that in the decade 1981-91 female cultivators increased by 4.57 percent points and in 1991-2001 we find an increase of only 2.47 percent points in total. Number of women agricultural labourers declined by -2.02 percent point whereas in 1991-2001 their number yet retarded by -18.79 percent points. The structure of female employment in 1981-91 decade was very different to what we find in 1991-01 decade. Female workers registered an increase in the category of household industry sector by 5.33 percent point (total) and in rural areas it increased by 4.88 percent points and 4.82 percent points in urban areas - this picture shows that the economy of Uttar Pradesh is also showing the path of development through secondary sector and thrust of employment is receding from the primary sector. There is influx of numbers in other services category yet showing boom in the service sector in post reform era by 4.16 percent points be it rural or urban areas.

Table 2: Female Workers in Industrial Category as % of Main Workers in Uttar Pradesh

	Cultivators	Agricultural Labourers	Agri Workers	Livestock rearing and Quarrying	Manufacturing (HHs.)	Non-HHs Manufacturing	Construction and Commerce	Storage and Communication	Other Services		
1981											
Total	36.29	43.75	80.04	0.33	0.06	6.36	2.56	0.32	1.37	0.20	8.80
Rural	40.36	48.14	88.50	0.31	0.06	4.66	1.82	0.22	0.72	0.05	3.72
Urban	4.48	9.54	14.02	0.52	0.04	19.70	8.33	1.17	6.42	1.37	48.45
1991											
Total	40.85	41.73	82.58	0.50	0.07	4.05	2.77	0.32	1.63	0.17	7.90
Rural	45.07	45.43	90.49	0.44	0.07	2.78	1.81	0.23	0.89	0.06	2.28
Urban	5.72	10.88	16.60	0.93	0.07	14.67	10.82	1.04	7.86	1.10	38.29
2001											
Total	43.32	22.94	66.26	4.93	0.12	9.39	3.55	0.69	2.62	0.39	12.05
Rural	49.96	26.18	76.14	5.43	0.12	7.66	2.37	0.40	1.57	0.14	6.17
Urban	4.54	4.04	8.58	2.00	0.10	19.48	10.42	2.39	8.74	1.89	46.40
Pre Reform Change in % Point											
Total	4.57	-2.02	2.54	0.17	0.01	-2.31	0.21	0.00	0.26	-0.03	-0.90
Rural	4.70	-2.71	1.99	0.13	0.01	-1.87	-0.01	0.02	0.16	0.01	-1.44
Urban	1.24	1.35	2.59	0.40	0.04	-5.03	2.49	-0.14	1.44	-0.27	-10.16
Post Reform Change in % Point											
Total	2.47	-	16.32	4.43	0.05	5.33	0.78	0.37	0.99	0.22	4.16
Rural	4.90	19.25	14.35	4.99	0.06	4.88	0.57	0.16	0.68	0.08	3.90
Urban	-1.18	-6.84	-8.02	1.07	0.03	4.82	-0.40	1.35	0.89	0.79	8.11

Source: Census of India, 1991, series I Final Population Totals, Brief Analysis of Primary Census Abstract Paper 2 of 1992. Census of India, 2001, series I, Primary Census Abstract, Total Population: Table A-5.

Note: Uttaranchal removed for all the years for comparison.

Employment of Females in Uttar Pradesh: An Inter-District Analysis

So far we have devoted our attention to inter-temporal variations in female work participation rates on the basis of Census data. These figures do throw light of the female work participation rates at the macro level but fail to provide an in-depth understanding on the regional issue for the State. The readings on regional economics do mention about variation in female participation rates district by district and region to region. It is quiet appropriate to indulge into such issues and try to comprehend the situation for the districts of Uttar Pradesh and highlight the regional perspective.

An analysis of FWPR in terms of regional disparity has been shown in Table 3. It highlights the fact that FWPR in various districts of Uttar Pradesh is very low and varies very sharply. This table shows disparity in FWPR and coefficient of equality in various districts of U.P. Disparity captured in the table is very remarkable. We find that with the passage of time i.e. one moving from 1981 through 1991 and in 2001 finds that disparity level in FWPR has declined be it rural or urban area. The coefficient of variation shows a decline. Average participation rates have shown a rising trend both in rural and urban areas of Uttar Pradesh. Mean of 14.38 percent has shown remarkable increase over the last decades i.e. 1981 and 1991. The disparity in FWPR has marked a decline from 1981 to 2001 be it rural or urban areas. Coefficient of variation registered a decline from 86.21 percent in 1981 to 77.80 percent in 1991 and further slumped to 54.12 percent in rural areas. Urban participation rates hovered around 3.37 percent in 1981 and 4.50 percent in 2001 with coefficient of variation of 63.53 percent in 1981 and further plunging down to 37.97 percent hence pointing towards decline in the disparity level.

Table 3: Regional Disparity in FWPR and Coefficient of Equality in U.P. (Rural/Urban)

Disparity in Female Work Participation						
Indicators	Rural			Urban		
	2001	1991	1981	2001	1991	1981
Mean	7.08	7.28	4.83	4.50	3.99	3.37
SD	3.83	5.66	4.16	1.71	2.02	2.14
CV	54.12	77.80	86.21	37.97	50.64	63.53
Disparity in Coefficient of Equality						
Indicators	Rural			Urban		
	2001	1991	1981	2001	1991	1981
Mean	28.06	22.77	15.75	19.50	20.63	12.05
SD	11.92	15.56	12.59	6.45	41.31	6.56
CV	42.48	68.31	79.95	33.07	200.21	54.45

Source: Based on Census of India.

It further shows the coefficient of equality for females and is an important and reliable indicator for showing their real employment status in society because it takes into account the relative proportions of females in population and employment (Saxena, 1990). For equality of females in their employment status the coefficient of equality should be 100. The coefficient of equality for various districts also exhibits a similar inconsistent pattern as shown by FWPR. The coefficient of equality varies widely from 7.76 for Shahjahanpur to 45.89 for Allahabad in rural areas and 12.19 in Sonbhadra and 54.89 in Mau for the year 2001. It is apparent from the table that there are less inter-district variations in the coefficient of equality as compared to FWPR. In 22 out of 70 districts the coefficient is below 40 whereas in 11 it ranges between 40 percent and 50 percent and in the

remaining 37 it is above 50 percent and below 86 percent. It helps us to conclude that in majority of the districts the real employment status of the rural females is at a very low level. The coefficient of variation is 42.48 percent in rural areas of Uttar Pradesh and much less in urban areas i.e. 33.07 percent for the year 2001. The value of coefficient of variation for FWPR is higher (54.12 percent) than that of coefficient of equality for rural females, and it implies that the former depicts more glaring inter-district variations than the latter.

Education and Female Work Participation

Studies have reiterated that investment in education has positive impact on total participation rate as it raises the income aspirations, opportunity cost of inactivity and also weakens the restrictive power of traditional culture in limiting the women participation in economic activity. Moreover, education is expected to be more directly correlated with occupation in case of women because of occupational segregation though the levels of education may not be linearly correlated with intensity to participate in labour force.

Empirical studies do confound the issue that consistent relationship between education and female participation rates exists. Few studies have focused on positive (Ellizoga, 1974) association and few others on negative (King, 1975) relationship has emerged and some others have shown a non-linear relationship with positive association at both high and low levels of education (Sinha, 1976) and a negative at some intermediate level of education.

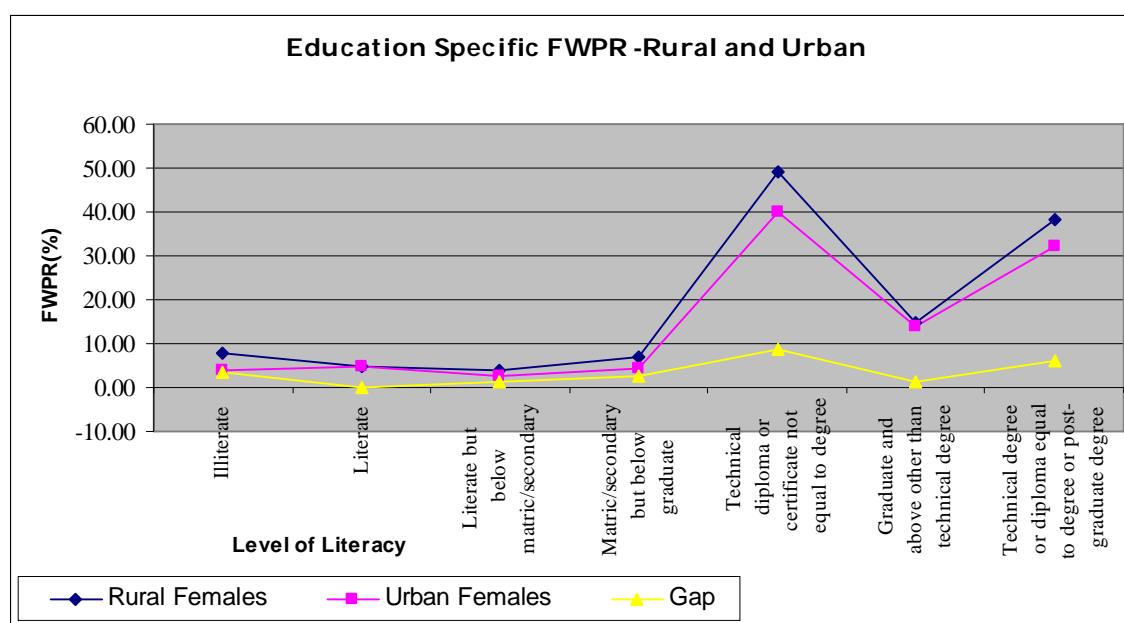
Generally we find that least educated have relatively high participation rates because they belong to the households where income is low and hence make their participation a must for survival. It is also worth noting that people with a bit higher level of education are less likely to belong to such low income households and are also likely to be at a competitive disadvantage in the wage-labour market. Probably education discourage then to accept low waged job. Finally those who are highly educated have the necessary competitive advantage and high paying job and are more likely to have a higher participation rates.

It is pertinent to analyse whether such situation stands true for Uttar Pradesh or not. The distribution of education-specific participation rates by sex and rural /urban distinction is presented in the Table 4. It shows that rural female participation rates are higher than the urban female participation rates at all the levels of education. The gap in male and female participation rates is much higher for urban areas than in rural areas but it narrows down as one moves from lower to higher level of education. Similarly, the gap between rural and urban female participation rates is narrowed at higher levels of education.

Table 4: Education Specific Participation Rates in Uttar Pradesh-2001

	Rural		Urban	
	Males	Females	Males	Females
Total Work Participation Rates	39.01	6.83	40.00	4.54
Illiterate	33.30	7.63	28.48	4.09
Literate	43.98	4.92	46.22	4.95
Literate but below matric/secondary	36.86	3.78	33.69	2.61
Matric/secondary but below graduate	60.25	7.14	55.20	4.48
Technical diploma or certificate not equal to degree	67.58	48.97	68.95	40.20
Graduate and above other than technical degree	68.59	14.80	71.21	13.71
Technical degree or diploma equal to degree or post-graduate degree	72.69	38.34	70.36	32.34

Source: Census of Uttar Pradesh, 2001



Determinants of Female Work Participation

This section seeks to identify the determinants of inter-district variations in the shares of female participation rates in Uttar Pradesh. The task of identifying these variables is however not simple as it involves a number of difficulties: firstly women participation in non-domestic work depends not only on economic factors but also on socio-cultural and demographic factors which influences women, secondly, socio-cultural factors vary from place to place and finally demographic behaviour also influences the participation rates. Hence women participation in economic activity is a multidimensional attribute and vary accordingly from one region to the other. For capturing these variations we begin with an analysis of correlates of FWPR.

Table 5: Description of Variable and Expected Relationship with FWPR- Urban Uttar Pradesh

Description of Variables	Variables	Expected Relationship with FWPR
CW ratio	X1	Negative
% SC popu to total popu	X2	Negative
Urban Literacy	X3	Positive
Urban Sex Ratio	X4	Positive
Urbanisation	X5	Positive
% MuslimFemales	X6	Negative
% Christian Females	X7	Positive
% of female workers in Primary Sec	X8	Negative
% of female workers in HH Industry	X9	Positive
% of female workers in Non HH Industry	X10	Negative
% of female workers to total workers in trade &commerce	X11	Positive
% of female workers to total workers in transport &communication	X12	Negative
% of female workers to total workers inOther services	X13	Positive
Nonagr establishment per 1000 women population	X14	Positive

Table 6: Description of Variable and Expected Relationship with FWPR- Urban Uttar Pradesh

Description of Variables	Variables	Expected Relationship with FWPR
Rural Sex Ratio	X1	Positive
Rural Literacy	X2	Negative
Child Women Ratio	X3	Negative
% SC popu to total popu	X4	positive
% MuslimFemales	X5	Negative
% Christian Females	X6	Negative
% of Cultivators among Females	X7	Positive
% of Agri lab among Females	X8	Positive
% of Female workers in sec sector among TFW	X9	Positive
% of Female workers in tertiary sector among TFW	X10	Negative
operational holding	X11	Positive
Gross Value of Agri Output per capita of rural population	X12	Negative
%IRRI area to GCA	X13	Positive
Index of Machanisation	X14	Negative
Cropping Intensity	X15	Positive
Nonagr establishment per 1000 women population	X16	Negative

Economic variables influencing the demand and supply of workers are important for determining the pattern and extent of women activity rate. Demand is determined by the availability of jobs for women and supply by the economic needs of the family. The influence of selected variables on WPR is discussed here in terms of correlation coefficients.

Demographic variables selected are sex ratio and child-women ratio. Sex Ratio determines the availability of women workers in a region and therefore, the total female employment in a region. Child-women ratio is chosen to look at the impact of children on women's non-domestic work.

Socio-cultural surrounding do sensitizes female decision regarding her job aspirations because of their secondary status as bread-winners. Some of the socio-cultural variables that are chosen are: literacy, Sex ratio, Scheduled caste population, presence of Christian and muslim population.

Table 7: Correlation Coefficients of FWPR and Independent Variables for Rural and Urban Uttar Pradesh

Rural	FWPR	Urban	FWPR
Cultivators	.323(*)	Primary	-0.103
Agrilab	.428(**)	HH INDUSTRY	.695(**)
Sec sector	-.512(**)	Non HH	-0.07
Te rsec	-.560(**)	Trade commerce	.478(**)
Sex ratio	.337(*)	Transport com	0.226
literacy	-0.106	Other servi	.485(**)
Cw ratio	-0.184	CW ratio	0.119
operationa	-0.054	SC	0.048
Agr output	-.448(**)	Literacy	0.184
Sc popu	0.194	Sex Ratio	.290(*)
irrigca	-0.105	Urbanisation	0.061
index	-.302(*)	Muslim F	0.071
cropping	-.275(*)	Christian F	0.049
muslim	-0.25	Non agr establishment	0.002
christian	-0.181		
Non agr establishment	-0.0498		

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Conclusion

In short, efforts to improve the position of women in Uttar Pradesh must focus on women as economic actors. The rural and urban female work participation rates in Uttar Pradesh and its districts is very low and varies widely among the districts. The disaggregated district level data in Uttar Pradesh exhibits high variations in female participation rates. The real employment status of rural and urban females as measured by coefficient of equality is also low. However the inter-state disparity in both FWPR and coefficient of equality is very glaring.

Coming to the determinants of female participation rates, economic factors such as agricultural output as indicative of income level and index of modernization all together determine 46.5 percent of variation in FWPR. Economic factors dominate in comparison to socio-cultural variables in determining female participation. All the variables taken together explain 66.9 percent of variation in FWPR in rural Uttar Pradesh and 87.8 percent of variation in urban Uttar Pradesh.

Sex ratio and presence of schedule caste population in a region has shown positive association with female participation rates. Literacy rates has shown negative association to RFWPR in rural Uttar Pradesh thus highlighting the fact that rise in literacy enhances aspirations for better paid and high profile jobs. Child women ration has also supported our hypothesis that presence of children in a family does not hamper female participation as agricultural workers. Some western districts (e.g., Shahjahanpur, Pilibhit, Saharanpur, Mainpuri, Agra, Rampur, Ferozabad, Badaun, Etah, Farrukhabad, Bijnore and Ghaziabad), which are economically more developed show very low female work participation rate. Our exploratory regression analysis has blatantly negated our hypothesis that increase in income reduces female participation rate instead it shows a weak but positive value. To sum up we can configure that economic and socio-cultural factors together determine FWPR in rural and urban areas of Uttar Pradesh.

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