

Labour Market Discrimination and Earning Differentials - An Evidence from Uttar Pradesh Based on NSS Data

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Employers may not treat workers, be they actual or potential employees in the same way - in which case discrimination is said to occur. It is a possible cause of market failure and we consider different aspects of labour market discrimination in this paper.

Introduction

Economists consider discrimination in the labour market to take two forms i.e. wage discrimination and job discrimination. Gender specific segregation is regarded as a stable and rigid phenomenon that exists in traditional as well as modern societies (Rothboeck and Acharya, 1999). Various studies underline the persistence of gender segregated labour market globally, as being independent of the level of industrial development or occupational diversification (Jose, 1987). Some studies even point out that there exists a positive correlation between the level of occupational segregation, size of modern activities and diversification of occupations (Bakker, 1988).

Gender discrimination against women in the market place reduces the available talent in an economy, which has negative economic consequences. Gender discrimination takes many forms. Many social practices seen as *normal* from a religious or cultural point of view (which may have deep historical roots) leave women out of the economic mainstream. These social practices may have profound economic consequences because they do not allow society to take advantage of the talent inherent in women.

This paper investigates these economic consequences in the form of sex segregation and earnings differentials as it exists in Uttar Pradesh's labour market. So far less is addressed to the question of women and their employment mobility in our economy. Since labour market structure in developing countries differs from that existing in industrialised countries (Sethuraman, 1992), we have implied Duncan's method of studying sex segregation in the State of Uttar Pradesh.

Conceptual Framework

The question that resounds about discrimination is-**What is discrimination? Why does discrimination occur in the labour market?**

Nobel-prize winning economist Kenneth Arrow has defined discrimination as "***the valuation in the market place of personal characteristics of the worker that are unrelated to worker productivity***".

These personal characteristics may be sex, race, age, national origin or sexual preference.

Discrimination is a **cause of labour market failure** and a source of **inequity in the distribution of income and wealth** and it is usually subject to government intervention e.g. through regulation and legislation. Discriminatory treatment of minority groups leads to **lower wages** and **reduced employment opportunities**, including less training and fewer promotions. The result is that groups subject to discrimination earn less than they would and suffer a fall in relative living standards.

The discussion among economists began as early as the late 19th century when Webb (1891) explained sex discrimination as resulting from weaker demand for women due to their lower living standards, lower family situation relative to men, restricted alternatives and immobility. Others attributed the existence of wage differentials to occupational crowding, unionism and absence of perfect competition (Edgeworth, 1922; Florence, 1931; and Robinson, 1933).

Basically three sources of Labour market discrimination have been analysed through research- personal preference or prejudice, imperfect information and market or monopoly power. On the basis of the source of discrimination they analyse, the theories of discrimination can, therefore thus classifying it into three broad categories:

- **The 'Taste' Model (Gary Becker)** - The preference discrimination theory was first developed by Becker (1957). He assumes that people have a taste of discrimination that is determined by non-economic considerations, and that to fulfill this taste they are prepared to pay a price either directly or in the form of reduced income to be associated with some persons and not with others. Depending on who has the aversion among employers, employees and customers, three categories of discrimination are described. They are willing to pay a price to avoid contact with other groups. With reference to race, this is equivalent to **racial prejudice**.
- **Statistical and institutional discrimination theory (Employer ignorance)** - Discrimination arises because employers are unable to directly observe the productive ability of individuals and therefore easily observable characteristics such as gender or

race may be used as proxies - the employer through ignorance or prejudice assumes that certain groups of workers are less productive than others and is therefore less willing to employ them, or pay them a wage or salary that fairly reflects their productivity, experience and applicability for a particular job. The approach of explaining discrimination in terms of uncertainty pertaining to productivity of men and women is known as the approach of statistical discrimination (Arrow, 1972; Thurow, 1975). The generalisation of productivity characteristics of groups on the basis of race, sex by employers leads to institutional discrimination, especially when stereotyping is incorrect (Marshall, 1974).

- **Theories on discrimination in non-competitive markets.** Discrimination in non-competitive markets takes the form of collusion, whereby trade union members collectively bargain to raise their pay by barring entry to certain groups, or through barriers to free entry into education as a result of government regulation.
- A fourth category includes theories that analyse discrimination in terms of combination of these three sources (Divakaran, 1996).
- **Occupational crowding effects** - Females and minorities may be crowded into lower paying occupations. Other concepts of discrimination include occupational crowding wherein it is argued that women and men are not perfect substitutes, because their level of investment in human capital differs and that therefore, there is occupational crowding of women in lower level jobs (Kao, Polacheck and Wunnava, 1994). Another concept is that of job discrimination where the discriminated group is denied access to higher paid jobs (Bergman, 1974). This concept of occupational segregation is considered to be appropriate in that of Indian context (Shah, 1988).

Data Set and Methodology:

The study is conducted on the basis of NSS data set to bring out the changes at a disaggregated level. I have looked into industrial segregation, occupational segregation, wage differentials between regular wage/ salaried and casual workers, wage differential between educated and illiterate worker by formulating indices assuming illiterate workers as the base (=100), wage differentials between men and women at for the state of Uttar Pradesh. The data set relates to 60th round and 62nd round surveys conducted by NSSO.

The index of dissimilarity is an indicator of just how much one group is spatially segregated from another group. It is used frequently by population geographers and demographers. The index of dissimilarity is the standard measure of segregation and is often used in studies of male and female, black and white areas, for example. The disparity between the two sexes regarding industrial/occupational distribution is measured by segregation index computed as follows:

$$SI = D/(k/2) \text{ where } D = \frac{1}{2} \sum |p_{i1} - p_{i2}|$$

where p_{i1} and p_{i2} are proportions of group -1 and group-2 workers respectively in the i th industry, assuming that the second group is notionally the disadvantaged group, i.e. the females. If there are k industrial groups, then limit of D will vary between 0, indicating that the two groups are perfectly identical, while 100 indicating that they are a perfect mismatch. If women and men are proportionately represented

in every occupation, the index will have the value of zero. The index ranges from 0 to 100 (when reported as a percentage), with 0 meaning no segregation or spatial disparity, and 100 being complete segregation between the two groups with no spatial intermingling. The calculation will produce an index of dissimilarity value as a percentage ranging from 0 to 100.

4. Work Participation Rates in Uttar Pradesh

At the outset we here try to capture the trend of employment in the labour market of the State economy. For this we have taken data from different NSSO rounds at the state level for depicting Work participation rates over the period since 1999-2000. Taking work participation for usual status category (PS+SS), we find that not much difference could be observed between 2004 and 2005-06, be it rural or urban work arena. Whereas under current weekly status category we could make out increases of about 1-3 percent in male WPR as well as female WPR both for rural and urban sector of the state economy. WPR considered from 1999 to 2005-06 show both upward and downward trends.

Table1: WPR (number of persons/person-days worked per 1000 persons/persons-days) according to 'usual status', 'current weekly status' and 'current daily status' approaches for different rounds in Uttar Pradesh .

Round (Survey Period)	PS	Usual Status (PS+SS)	Male		PS	Female		
			Current Weekly Status	Current Daily Status		Usual Status (PS+SS)	Current Weekly Status	Current Daily Status
			Rural					
62nd Round(2005-06)	495	504	494	487	49	84	66	52
60th Round(2004)	481	491	480	462	46	83	65	55
59th Round(2003)	488	495	487	-	44	75	46	-
58th Round(2002)	495	497	492	-	39	47	35	-
57th Round(2001-02)	503	503	501	-	31	31	30	-
56th Round(2000-01)	479	479	477	-	29	29	31	-
55th Round(1999-2000)	484	486	482	480	33	45	38	36
			Urban					
62nd Round(2005-06)	512	514	513	508	48	53	51	48
60th Round(2004)	489	491	486	479	33	45	39	36
59th Round(2003)	492	493	491	-	40	49	41	-
58th Round(2002)	488	489	489	-	34	38	35	-
57th Round(2001-02)	476	477	476	-	32	32	32	-
56th Round(2000-01)	465	465	465	-	27	27	27	-
55th Round(1999-2000)	449	449	446	444	29	31	30	30

Industrialisation changes the distribution of workers by status in favour of employees (Deshpande and Deshpande, 1996). The NSSO combines employers and own account workers into one category, the self employed. Table 2 shows that another important issue is that of employment status in the state economy. Table 2 shows distribution of workers by different employment status viz; self employed, regular wage/salaried and casual labour, in Uttar Pradesh for different NSSO rounds. During latest scenario employment of male and female in rural areas was to the level of 69 and 68 percent in self

employed category. The participation rate in the urban areas was to the tune of 58 and 52 percent in the self employed category. Both male and female workers employed as regular wage/salaried, were more in urban areas as compared to rural areas. Workers employed as casual workers were reported to be more in rural sector as compared to urban labour market. Table also reflects that during 1999 to 2005-06 there is rise in the participation rates of male self employed workers both in rural and urban areas. In rural areas in 1999 there were 65 percent male workers in self employed category which in 2005-06 increased to 69 percent. Casual male workers have shown a downward trend during the same period. Both in rural as well as urban areas female casual workers have registered a decline. Regular female workers can be seen increasing in rural areas but a decline is observed in urban areas.

Table2: Distribution of Workers by Employment Status in Uttar Pradesh for different NSS surveys

NSS Round (Survey Period)	Principal Status			All(Ps+SS)		
	Self- Employed	Regular Wage/Salaried	Casual Labour	Self- Employed	Regular Wage/Salaried	Casual Labour
			Rural Males			
62nd Round(2005-06)	68.70	5.90	25.40	68.90	5.80	25.20
60th Round(2004)	65.60	6.90	27.50	66.10	6.80	27.10
59th Round(2003)	68.80	5.70	25.50	69.20	5.60	25.30
58th Round(2002)	67.80	9.70	22.50	67.90	9.60	22.40
57th Round(2001-02)	63.90	5.30	30.80	63.90	5.30	30.80
56th Round(2000-01)	65.40	3.90	30.80	65.40	3.90	30.80
55th Round(1999-2000)	64.60	4.60	30.70	64.60	4.60	30.60
			Rural Females			
62nd Round(2005-06)	67.70	8.90	23.40	68.70	5.30	26.00
60th Round(2004)	65.80	3.70	30.50	71.30	2.10	26.60
59th Round(2003)	63.70	3.60	32.70	68.70	2.30	29.00
58th Round(2002)	67.20	4.40	28.40	69.20	3.60	27.20
57th Round(2001-02)	66.40	2.80	30.90	66.40	2.80	30.90
56th Round(2000-01)	39.00	3.60	57.40	39.00	3.60	57.40
55th Round(1999-2000)	67.00	4.40	28.40	69.10	3.30	27.40
			Urban Males			
62nd Round(2005-06)	57.90	28.20	13.90	58.00	28.10	13.90
60th Round(2004)	52.00	28.30	19.60	52.00	28.30	19.70
59th Round(2003)	56.10	29.50	14.40	56.20	29.50	14.40
58th Round(2002)	56.70	25.80	17.40	56.80	25.80	17.40
57th Round(2001-02)	53.80	26.40	19.50	53.80	26.40	19.50
56th Round(2000-01)	53.30	28.20	18.60	53.30	28.20	18.60
55th Round(1999-2000)	50.30	29.70	18.70	50.30	29.70	18.70
			Urban Females			
62nd Round(2005-06)	52.00	35.70	12.30	54.40	32.10	13.50
60th Round(2004)	41.70	42.20	15.80	53.20	31.80	14.80
59th Round(2003)	44.20	33.10	22.70	50.90	28.20	20.90
58th Round(2002)	51.80	33.00	15.20	55.10	30.40	14.60
57th Round(2001-02)	53.00	25.60	16.10	53.00	25.60	16.10
56th Round(2000-01)	55.40	33.50	11.10	55.40	33.50	11.10
55th Round(1999-2000)	36.70	41.00	16.50	38.40	39.60	16.40

Source: NSSO 62nd round, State Sample.

This brief review of the employment situation in Uttar Pradesh brings to the fore both quantitative and qualitative deterioration in the labour market. This conclusion is not particularly instructive for two reasons: firstly it treats the labour market as an integrated whole or at best as a dichotomous in terms of demand and supply is to regard labour as a commodity and labour market as a purely economic institution (Deshpande and Deshpande, 1996). Neither perspective highlights to help in understanding its functioning for it a primarily a social institution. The data available at the state level are not rich enough to enlighten us on the functioning of the labour market as a whole. In the following we try to see if data would support stratification and segmentation *Prima facie*.

Sex Segregation or Index of Dissimilarity

Male and female workers were distributed dissimilarly across industries and occupations. The two distributions would be equal if the both men and women were redistributed from industries/ occupations in which their share was high to those in which it was low.

Table 3: Segregation Index by Industrial Classification for Usual Status (PS+SS) Workers in Uttar Pradesh

		60th Round		62nd Round	
		Rural	Urban	Rural	Urban
A :	Agriculture, hunting and forestry	0.499	0.404	0.445	0.776
B :	Fishing	0.065	0.033	0.035	0.012
C :	Mining and quarrying	0.052	0.258	0.533	0.102
D :	Manufacturing	0.782	0.090	0.001	0.278
E :	Electricity, gas and water supply	0.073	0.751	0.455	0.107
F :	Construction	0.799	0.467	0.387	0.889
G :	Wholesale and retail trade; repair of motor vehicles etc.	0.074	0.391	0.030	0.248
H :	Hotels and restaurants	0.152	0.873	0.208	0.151
I :	Transport, storage and communications	0.365	0.349	0.125	0.399
J :	Financial intermediation	0.037	0.428	0.428	0.305
K :	Real estate, renting and business activities	0.210	0.952	0.294	0.426
L :	Public administration and defence; compulsory social security	0.256	0.902	0.640	0.839
M :	Education	0.291	0.149	0.574	0.704
N :	Health and social work	0.230	0.167	0.591	0.241
O :	Other community, social and personal service activities	0.035	0.143	0.035	0.110
P :	Activities of private households as employers and production activities	0.011	0.077	0.000	0.428
Q :	Extraterritorial organizations and bodies	0.000	0.000	0.945	0.682

Using NSSO data and applying the above mentioned method, this paper tries to explore the level of gender segregation and wage differentials in the labour market of Uttar Pradesh. Table 3 shows segregation index for the industrial sector of Uttar Pradesh. It is obvious, going by the above measure of segregation that overall segregation has declined for the Agriculture both in the rural and urban areas. What is worth mentioning is that index of dissimilarity thus calculated for the manufacturing industry in rural areas have increased from 2004 to 2005-06. Whereas in urban areas reverse is true. The ID shows

that in 2005-06 about 27 percent workers in manufacturing sector need to be re-located to achieve zero order gender segregation.

Table 4: Sex Segregation Index by Occupational Classification for Principal Status Workers in Uttar Pradesh

occupation group (division/group)	60th Round		62nd Round	
	Rural	Urban	Rural	Urban
(1)				
division 0 & 1 Professional	0.078	0.082	0.260	0.181
division 2	0.112	0.081	0.052	0.533
division 3	0.699	0.785	0.018	0.434
division 4	0.013	0.080	0.402	0.423
division 5	0.384	0.235	0.474	0.872
division 6	0.929	0.327	0.253	0.319
divisions 7,8 & 9	0.799	0.699	0.996	0.018

Table 4 shows that male and female are distributed dissimilarly across occupation too. What is more striking is that gender dissimilarity across occupations increased from 7.8 percent to 26 percent in professional technical and related field in rural areas of the State. In urban areas too this dissimilarity has increased but only marginally from 8.2 percent in 2004 to 18.1 percent in 2005-06.

Wage Differentials

It is known to all that earnings are different for different types (Sex wise) of workers. As women are not destined to be in workforce leaving their house chores behind their participation in the labour market is very negatively affected. Their earnings are secondary in nature and hence are lowly paid, experiencing cumulative neglect through generations and hence land up in low category of employment. It is observed from time immemorial that differences in endowments play an insignificant role in such wage inequality, while substantial form of it is explained by pure gender discrimination (Mukherjee, 2008). Women are entrusted with lower wages compared to their male counterparts with similar endowment in the same industry/occupation. It is all due to the fact that even with adequate endowment, women are engaged in lower stratum of each industry and occupation group and consequently receive lower pay.

a. Wage Differential Between Regular and Casual workforce:

The NSSO distinguishes between casual and regular workers. The wage rates differentials reported in Table 5 show that the premium that male and female particularly female regular workers earn over their casual counterparts is not only substantial but differs substantially across industries. The differences are not standardized for differences average daily earnings of formally schooled regular male and female workers. They show that access to education may be an important determinant of segmentation of regular workers.

Table 5: Regular/Casual Wage Differential by Industry and Sex (Uttar Pradesh)

industry division	Rural				Urban			
	Male		Female		Male		Female	
	60th	62nd	60th	62nd	60th	62nd	60th	62nd
agriculture	173	119.29	86	144.61	101	96.4	183	0.0
mining and quarrying	226	130.04	-	0.00	-	0.0	-	-
manufacturing	192	151.68	0	0.00	146	167.8	82	310.1
manufacturing	137	235.97	0	0.00	214	192.4	296	78.5
electricity, gas and water	386	504.15	-	-	-	225.2	467	-
construction	116	125.42	0	0.00	200	292.7	114	67.6
trade	136	56.08	-	-	149	124.3	333	104.4
transport & storage etc.	218	250.13	-	-	223	208.6	-	221.4
services	229	427.79	-	-	370	433.8	-	-
services	452	274.53	479	148.80	412	260.4	574	551.6
non- agriculture	298	303.57	362	167.76	268	287.8	491	351.0
all	332	314.03	374	187.18	278	293.4	534	353.9

The high premium the more educated enjoyed is surprising because according to the NSSO (1990) in the recorded unemployment in the country the educated formed 73 percent, high enough a share to discredit the competitive hypothesis (Deshpande and Deshpande, 1992). The table also brings to the fore the fact that strange at first sight, that educated women rather than educated men earn a higher premium over their uneducated counterparts. We shall see that women are across industry and occupation, less than men irrespective of their qualification but uneducated among them earn much less than the educated.

b. Indices of Daily Earnings

To highlight the issue of high premium the more educated enjoy over their illiterate counterparts can be seen in the Table 6-9 below. One fact that is bold enough and needs focus is that the educated women rather than educated men have higher earnings bias in their favour. We have calculated Indices for both the rounds and both rural and urban areas.

Table 6: Indices of Daily Earnings of Regular Workers by Industry and Education, Rural Uttar Pradesh (Illiterate =100)

industry division	general educational level					
	literate and upto middle		secondary & higher secondary		graduate & above	
	Male	Female	Male	Female	Male	Female
(1)						
agriculture (01-05)	52.48	71.43	215.27	83.21	0.00	0.00
mining and quarrying (10-14)	-	-	-	-	-	-
manufacturing (15-22)	138.38	-	167.30	-	130.83	-
manufacturing (23-37)	129.14	-	128.13	-	161.72	-
electricity, gas and water (40-41)	478.98	-	703.41	-	733.33	-
construction (45)	117.32	-	173.03	-	0.00	-
trade (50-55)	57.27	-	73.34	-	95.55	-
transport & storage etc. (60-64)	151.03	-	143.93	-	150.31	-
services (65-74)	155.74	-	239.29	-	362.16	-
services (75-93)	91.85	115.32	150.25	52.38	209.83	86.04
non- agriculture (10-99)	114.66	115.32	190.42	52.63	286.87	86.04
all	121.53	184.47	203.84	92.28	308.37	152.56

Source: 60th Round NSS

Indices thus calculated for 60th Round show that female literate upto middle in rural areas are earning 71.43 percent of the earning of their counterparts who are illiterate in agriculture. What is the importance of education in agriculture can be questioned thus. Same is the story about male earnings. In services middle educated female are earning 115.3 percent premium over illiterate counterparts. One thing more can be added is that educated females rather than educated males earn a higher premium over their uneducated groups in their respective industry of operation. We know the fact that women earn across industry and occupation less than men irrespective of their qualification but uneducated among them earn much less than the educated.

Indices thus calculated for 60th Round for urban areas show that female literate doesn't make any difference in agriculture. In agriculture if males are educated upto secondary earn 184 percent more than the earning of their counterparts who are illiterate in agriculture. The importance of education can be highlighted thus. But as education level increases to graduation male show that their earning is only 79 percent of their illiterate counterparts. In services middle educated female are earning 115.3 percent premium over illiterate counterparts. One thing more can be added is that educated females rather than educated males are earn a higher premium over their uneducated groups in their respective industry of operation. We know the fact that women earn across industry and occupation less than men irrespective of their qualification but uneducated among them earn much less than the educated.

Table 7: Indices of Daily Earnings of Regular Workers by Industry and Education, Urban Uttar Pradesh (Illiterate =100)

industry division (1)	general educational level					
	literate and upto middle		secondary & higher secondary		graduate & above	
	Male	Female	Male	Female	Male	Female
agriculture (01-05)	0.00	-	184.40	-	79.03	-
mining and quarrying (10-14)	-	-	-	-	-	-
manufacturing (15-22)	56.31	-	75.89	-	136.57	-
manufacturing (23-37)	172.49	0.00	233.05	0.00	339.97	115.52
electricity, gas and water (40-41)	34.48	-	58.66	-	68.08	-
construction (45)	-	-	-	-	-	-
trade (50-55)	176.73	-	222.94	-	353.49	-
transport & storage etc. (60-64)	98.62	-	124.61	-	215.48	-
services (65-74)	115.13	-	178.75	-	401.19	-
services (75-93)	118.89	98.00	170.99	452.27	227.86	122.56
non- agriculture (10-99)	115.11	130.02	191.31	670.05	314.85	212.01
all	115.97	130.02	192.48	670.05	315.34	209.61

Source: 60th Round NSS

Indices calculated for 62nd round of NSSO for rural areas (Table 8) of Uttar Pradesh once again show that females in agriculture can not make any difference between educated and uneducated whereas educated males up-to middle are earning more than their uneducated brethren. But as we proceed to other more educated categories we see that even males education is not influencing their earning- they are earning 80.4 percent of the earning of illiterate counterparts if educated till secondary level and if

educated till graduation earn only 34.5 percent of their illiterate counterparts. Educated till secondary and graduation makes females in non-agricultural sector to earn higher premium than their counter parts who are illiterate.

Table 8: Indices of Daily Earnings of Regular Workers by Industry and Education, Rural Uttar Pradesh (Illiterate =100)

industry division (1)	general educational level					
	literate and upto middle (02-05)		secondary & higher secondary (06-07)		graduate & above (10-11)	
	Male	Female	Male	Female	Male	Female
agriculture (01-05)	136.5	0.0	80.4	0.0	34.5	0.0
mining and quarrying (10-14)	0.0	-	100.0	-	0.0	-
manufacturing (15-22)	137.4	-	175.1	-	271.3	-
manufacturing (23-37)	104.2	-	73.5	-	286.8	-
electricity, gas and water (40-41)	-	-	-	-	-	-
construction (45)	62.3	-	214.3	-	0.0	-
trade (50-55)	91.9	-	38.7	-	142.0	-
transport & storage etc. (60-64)	116.2	-	232.5	-	183.2	-
services (65-74)	-	0.0	-	0.0	-	0.0
services (75-93)	408.7	116.8	508.4	129.8	687.1	246.5
non- agriculture (10-99)	149.6	125.9	263.0	139.8	365.5	265.6
all	151.6	125.9	265.9	139.8	368.4	265.5

Source: 62nd Round NSS

Table 9: Indices of Daily Earnings of Regular Workers by Industry and Education, Urban Uttar Pradesh (Illiterate =100)

industry division (1)	general educational level					
	literate and upto middle (02-05)		secondary & higher secondary (06-07)		graduate & above (10-11)	
	Male	Female	Male	Female	Male	Female
agriculture (01-05)	136.9	-	0.0	-	0.0	-
mining and quarrying (10-14)	-	-	-	-	-	-
manufacturing (15-22)	91.2	-	101.3	-	220.3	-
manufacturing (23-37)	117.2	102.7	162.0	0.0	280.2	0.0
electricity, gas and water (40-41)	222.9	-	749.3	-	0.0	-
construction (45)	79.9	0.0	323.8	0.0	372.1	0.0
trade (50-55)	63.5	0.0	87.9	0.0	158.6	590.1
transport & storage etc. (60-64)	76.9	-	74.9	-	124.7	-
services (65-74)	114.0	140.0	428.7	480.1	471.3	822.3
services (75-93)	56.1	72.5	70.8	195.2	107.5	163.1
non- agriculture (10-99)	69.7	104.0	113.0	279.3	193.2	244.7
all	70.1	104.0	113.6	279.3	194.2	244.7

Source: 62nd Round NSS

The story of urban Uttar Pradesh too is not very different. The Table 9 above show that females earning indices for non-agricultural sector is more than males, besides this as the level of education increases the indices is also seen to increase. Females who attain graduation earn 822.3 percent more than illiterate sisters whereas males earn just of that. So we can conclude that the cumulative neglect that the females have experience over the time has started paying off after being educated. This also conforms to the notion that access to education may be an important determinant of segmentation of regular workers. The high earnings of more educated is not surprising as we know that education is the corner stone to

growth and development which can be achieved by high income. Lower male indices shed light that the level of exploitation for males is less as compared to females – hence makes their level of earning lesser to females, though in real terms they are earning more than females irrespective of industry and occupation.

c. Wage Differentials Based on Gender

Gender differentials in terms of income are consistently high across occupations and industry in Uttar Pradesh too just as at All India level. An easy explanation is usually offered based on the skill or productivity differentials across sexes. Women despite greater intensity of work they still continue to receive low wages. Wage differentials in the labour market are ascribed to two facts: a) pre-market discrimination involving lack of access to education, training, experience - factors which increase human capital and enhance the marginal productivity of labour and b) post- market discrimination involving differential wages for similar quantum of human capital.

In Table 10 we report gender based wage differentials among equally educated regular wage/salaried workers by industry in rural Uttar Pradesh in 2004 and 2005-06. Wage data for equally educated men and women across industries are available in the NSSO rounds from 60th and 62nd round of the state sample. We tried to capture the changes over the period just to delve deep into the issue of increasing and decreasing discrimination. The data reports earnings of men and women by educational levels in both the rounds and hence makes comparison possible. A differential higher than 100 in any cell implies that a woman was paid a higher wage than an equally educated man in the same industry/ occupation.

Table 10: Wage Differentials Based on Gender of Regular Wage Salaried Employees Aged 15-59 by Industry and Education in Rural Uttar Pradesh

industry division	general educational level							
	not literate (01)		literate and upto middle (02-05)		secondary & higher secondary (06-07)		graduate & above (10-11)	
(1)	60th Rd	62nd Rd	60th Rd	62nd Rd	60th Rd	62nd Rd	60th Rd	62nd Rd
agriculture (01-05)	51.07	95.75	69.51	0.00	-	0.00	45.24	-
mining and quarrying (10-14)	-	0.00	-	-	-	0.00	0.00	-
manufacturing (15-22)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-
manufacturing (23-37)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-
electricity, gas and water (40-41)	0.00	-	0.00	0.00	0.00	0.00	0.00	-
construction (45)	0.00	0.00	0.00	0.00	-	0.00	0.00	-
trade (50-55)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-
transport & storage etc. (60-64)	0.00	0.00	0.00	0.00	0.00	0.00	95.56	0.00
services (65-74)	0.00	-	0.00	0.00	0.00	0.00	0.00	-
services (75-93)	131.17	154.26	164.68	44.10	53.78	39.38	70.03	0.00
non- agriculture (10-99)	200.91	74.83	202.07	62.98	60.25	39.78	98.23	0.00
all	121.79	76.15	184.87	63.21	60.25	40.03	92.34	0.00

Looking at the Table 10 and also taking into account educational level but without industry of employment we find that an average illiterate woman regularly employed in 2004 was paid a wage 121.79 percent of the male wage but in 2005-06, she was getting a wage that was much lower, only 76.15 percent of the male wage. Wage differential has widened substantially between two rounds for the illiterate workers. Same is the story for middle pass workers. But workers educated till secondary and graduate experience fall in the wage differentials during the period. Analysis of the similar pattern industry wise suggests that almost same picture could be captured for non-agricultural worker whereas pattern of differentials for workers in agriculture shows that not illiterate females were earning only 51.07 percent of male earnings in 2004 but this earnings increased to 95.75 percent of male earnings in 2005-06. The ratios reported for services sector by educational level show that the female-male wage ratios have experienced steep increase in their relative wage between the period under study.

The urban Uttar Pradesh is also not far from the similar trend as far as wage differentials are concerned. Table 11, relating to wage ratios of equally educated regular wage/salaried workers in urban Uttar Pradesh, reveals that gender based wage differentials had widened between 2004 and 2005-06. On an average, women were getting 104.76 percent of male earnings being not literate in 60th round period i.e. 2004 but this ratio declined to mere 56.6 percent in 2005-06. In manufacturing and service and other non-agricultural industry wage ratios declined except in the category secondary and higher educated workers reverse happened for manufacturing industry.

Table 11: Wage Differentials Based on Gender of Regular Wage Salaried Employees Aged 15-59 by Industry and Education in Urban Uttar Pradesh

Industry Division	general educational level							
	not literate (01)		literate and upto middle (02-05)		secondary & higher secondary (06-07)		graduate & above (10-11)	
(1)	60th Rd	62nd Rd	60th Rd	62nd Rd	60th Rd	62nd Rd	60th Rd	62nd Rd
agriculture (01-05)	0.00	0.00	-	0.00	0.00	-	171.00	-
mining and quarrying (10-14)	-	-	-	-	0.00	-	-	-
manufacturing (15-22)	0.00	0.00	48.40	42.08	38.48	151.72	0.00	-
manufacturing (23-37)	198.93	41.93	0.00	36.75	0.00	0.00	67.60	0.00
electricity, gas and water (40-41)	0.00	0.00	0.00	0.00	86.65	0.00	0.00	0.00
construction (45)	-	58.96	0.00	0.00	0.00	0.00	26.23	0.00
trade (50-55)	0.00	16.70	0.00	0.00	91.67	0.00	0.00	0.00
transport & storage etc. (60-64)	0.00	0.00	0.00	30.22	0.00	0.00	0.00	0.00
services (65-74)	0.00	38.03	0.00	46.70	0.00	42.58	48.75	0.00
services (75-93)	125.75	44.56	103.65	57.56	332.62	122.88	67.64	63.39
non- agriculture (10-99)	103.99	56.37	117.45	84.01	364.21	139.26	70.02	66.25
all	104.76	56.66	117.45	84.07	364.69	139.26	69.63	66.25

Table 12: Wage Differentials Based on Gender of Casual Wage Earners Aged 15-59 by Industry in Uttar Pradesh

industry division	Rural		Urban		Combined	
	60th Rd	62nd Rd	60th Rd	62nd Rd	60th Rd	62nd Rd
agriculture	91.24	81.34	70.26	92.66	90.49	81.17
mining and quarrying	0.00	72.86	-	0.00	0.00	73.00
manufacturing	40.74	98.75	63.75	69.37	39.53	83.92
manufacturing	75.22	110.75	67.15	63.40	74.72	84.36
electricity, gas and water	0.00	0.00	-	0.00	97.02	0.00
construction	80.57	83.93	82.65	105.01	79.71	89.69
trade	0.00	0.00	48.38	42.40	49.06	31.61
transport & storage etc.	0.00	0.00	0.00	88.20	0.00	112.06
services	0.00	0.00	0.00	0.00	0.00	0.00
services	65.97	73.83	79.54	34.74	75.99	59.80
non- agriculture	73.93	82.15	68.35	73.68	71.96	81.15
all	81.97	77.99	65.15	74.57	78.65	77.43

Source: NSSO 60th and 62nd Round (State sample).

Table 12, shows the wage differentials for casual wage earners in different industry group. In rural areas the wage differentials have widened between the two points of time. Gender wage differentials have declined in agriculture only while, rest of the industries have shown a rising trend. Overall picture for rural areas show that wage differential have increased with fall in the gender wage ratios. In urban Uttar Pradesh the gender wage differentials have been reported as decreasing as wage ratios have increased over the period. The situation for the total casual workers too show that wage differentials have widened marginally but industry wise data show that in agriculture, trade, services and non-agriculture this wage differentials have registered decline for the whole of Uttar Pradesh.

7. Conclusion

Women workers in Uttar Pradesh are poised to both gender segregation and Wage differentials in nine fold industries as well as in different occupational groups. The labour market is more segmented in the present time as compared to a year before. In some industries and also in some occupations discrimination based on gender would diminish. To the extent that a woman's industrial and occupational options are limited. With the policy shift women should find easier to enter the labour market. This would in turn would also help them to diversify their industrial and occupational choices thus leading to reduction in sex-stereotyping of jobs as done earlier. Wage differentials based on education are showing positive and negative trends in nine industrial and occupational categories. The highly educated men and women would be employed in high paid jobs. Such jobs are regular wage /salaried jobs. Wage differentials are also noted between regular wage/ salaried and casual workers of the State. Educated women earned more than the illiterate counterparts –its true but another thing that is remarkable is that female earning differentials are much more than male workers in that particular educational group. As

often pointed out such segmentation would be removed by changing perception about women's economic contribution and giving priority to their education to help secure better jobs for them.

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