

Culture, discrimination and women's work force participation: a study on Indian labor market *

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Abstract

Gender discrimination in the labor market is usually seen as the result of the employers' cultural bias. In this paper, we see the issue from a larger perspective by combining both labor market and household decision making together. We conjecture that gender gap in work participation and wage may also arise because of women's decision to perform less in workplace or for that matter, not participate at all in the labor market. We argue that such choice may arise in equilibrium in presence of patriarchal social norms which will induce women to work more for family and less for workplace. Our theoretical model predicts that women coming from families with stronger patriarchal values will perform worse in the labor market than the women from liberal families. Also, such effect of family culture will not be observed for the male members. Our empirical result using IHDS data set supports the prediction. However, we find there are some variations in the empirical result depending on the work site (rural/urban) and nature of jobs.

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1 Introduction

The issue of gender discrimination in labor market in the forms of gender wage gap and low labor force participation for women is a well researched area in labor economics. Unlike the dominant trend in the literature which explains the gender issue in labor market in terms of discrimination by the employers, in this paper we try to capture discrimination by integrating labor market with family decision making. In particular we conjecture that women's decision to work and ability to earn, besides other factors such as education and experience, depend on their position in their respective families - women from families with liberal values can work and earn more. This is because women from patriarchal families face stronger cultural constraints in joining the labour market than those from liberal families.

Our paper combines two important strands of literature - gender gap in labor market and effect of culture in economic decision making. The standard literature on gender discrimination characterizes the discrimination in many ways. It can be measured by gender wage gap and its variants such as sticky floor, glass ceiling, and also by occupational gender sorting. Gender wage gap is measured by the pay differential between male and female workers of same abilities in the same occupations. It has been observed that female to male wage is falling across the countries over time making it an international phenomenon. Sticky floor refers to the phenomenon where earning get stuck in the low end low productive low wage level. On the other hand, glass ceiling refers to the gender wage gap at the top level of the wage. The term is derived from a metaphoric invisible ceiling which prevents the women workers from climbing the professional ladder. There is a substantial literature which estimates the existence of both of these phenomena for different labor markets (Arulampalam et al., 2007; Chi and Li, 2008; Christofides et al., 2013; Khanna, 2012). The next form of gender discrimination is gender sorting. Here literature focuses on gender stereotyping and segregation of workforce in "female job" and "male job" all over the world. Here two types of stereotyping occur, one with care giving and low skilled jobs and other with comparative efficiency of women in a particular job. Anker et al. (1998) estimated the concentration of women in nine comparable female jobs for different countries in the world. For India they found nursing has maximum feminization (93 percent), teaching (28 percent), maid and

house-keeping related services (53.2 percent), tailoring services (11 percent) has moderate amount of feminization . Similarly there are some masculine jobs with concentration of male workers.

Even though all these forms characterize gender based discrimination, each of them is caused by different causes and therefore needs different institutional responses. This study particularly focuses on gender wage gap and gender based occupation sorting in the context of Indian labor market. Measuring discrimination is an empirical challenge because existence of gender wage gap does not necessarily indicate discrimination and cultural bias against women. For example, a woman worker may get less wage than his male colleague just because she is less skilled. Given that we cannot directly observe employers' attitude towards women and subsequent discrimination, usually gender wage discrimination is measured by measuring the occupation specific wage differential between male and female which cannot be explained by any of the observables such as education, experience etc. The technique proposed to do this is known as the Oaxaca Blinder decomposition (Oaxaca, 1973; Blinder, 1973). Many studies reported the existence of such gap in the context of many countries.

This technique implicitly assumes that if the gender wage gap cannot be explained by any of the observed characteristics of the workers it must be because of the cultural bias of the employers. However, the unexplained wage gap may also arise if women are less productive than their male counterpart and the productivity difference can only be observed by her office supervisor. If this explanation is true, gender wage gap that cannot be explained by observables, does not necessarily indicate gender discrimination in workplace. Such effort differential may be the result of family norms which require the women to take care of household chores, raise kids leaving them with less time and energy to put high effort in their work places. The current paper conjectures that women sacrificing their career growth for household duties are more likely to come from families with patriarchal values. This allows us to link this work to a newly emerging field of culture and economic outcome which are pioneered by papers looking at the relationship between trust and trade (Guiso et al., 2004), culture and effort (Ichino and Maggi, 2000), religion and growth (Becker and Woessmann, 2009; Tabellini, 2010). A section of this strand of the literature also looks at the relationship between culture and economic outcomes in the his-

torical context (Greif, 1993; Botticini and Eckstein, 2005; Nunn and Wantchekon, 2011).

The section of the literature that is closely related to the current paper looks at the effect of culture on women's decision to work. In the developed countries women's labor force participation (WLFP) increased over time. This evolution, among other things has been found to be shaped by cultural values. For example, Fernandez et al. (2004) show that men whose mothers were working while they were growing up tend choose working women as wives. The result was quite robust and the authors interpreted this as intergenerational transmission of preference.

Measuring culture is the most challenging part in this body of work. This is solved in three ways: case study, measuring culture using survey question and epidemiological approach. Before moving to our work which uses the second method, let us briefly discuss the third approach used by Fernandez and Fogli (2005) and Fernandez (2007b). In this approach the authors look at the immigrants to the U.S. For isolating the effect of their culture from the effect of market and institutions they face in the U.S., the authors use the culture prevailing in their country of origin as the proxy of their own culture. Then they find the effect of the proxy culture on WLFPR. They found that WLFPR in the country of origin in 1970 is strongly related to women's work hours in 1990s and the result is quite robust to different specifications. Fernandez (2007a) looked at the same problem using the World Value Survey (WVS). She used answers to two questions in WVS- 1. Being a housewife is just as fulfilling as working for pay, and 2. Having a job is the best way for a woman to be an independent person. Instead of using the LFP in the country of origin, she used how the country of origin responded to these questions. The result was consistent with that she found in the other papers - women hailing from countries with conservative values are less likely to work.

There is not much in the Indian context along this line except that it is generally observed that women's labor force participation is declining over time. We in this paper however do not try to explain the declining work force participation. Instead we elaborate on how family culture influences women's decision to work and their income.

We argue that a woman living in a patriarchal family face more constraints for work than one living in a liberal family. Hence, for working women living in a patriarchal families may find it more difficult than its counterpart from liberal family background to take more challenging tasks and therefore, may earn less wage. In the next section we elaborate on a brief theoretical framework.

2 Theoretical Framework

A family consists of a male member and a female member. In this section we take the earning of a male member as given and analyze the decision making process of the female counterpart. Suppose in the labor market there is only one option for the woman – work for industry I. However, within the production process of X there are several tasks represented by index $i \in [0, 1]$ where a higher value of i represents a more complex task. The wage and effort level for a more complex task is higher than that a less complex one. Suppose a woman takes two decisions: join a job and decide on the level of complexity. The decision process more or less are the same for both the processes. Each woman has the education level i which is good enough for performing task $j \leq i$. The payment for not working is \bar{w} while payment for doing task i is $w_i > w_j$, for $i > j$.

The effort cost for doing a task is e_i which is the normalized value of time required. This means that more complex the task is, more is the time taken at office and less is left for home. We assume

$$w = w(e) \quad (1)$$

with $w' > 0, w'' < 0$

For a closed form solution, we choose a specific functional form

$$w_i^f = 2(e_i^f)^{\frac{1}{2}} \quad (2)$$

The woman devotes the rest of her time for improving the quality of the family life. This may include the management of household affairs, raising kids etc. Her objective function depends on two things: family income which is the sum of her income and her spouse's income and the quality of the household. The quality of household also depends on the time she devotes and the time her husband devotes. But we

assume that the more parochial the family is, the more it depends on her effort. Hence, she maximizes family utility which is given by

$$U_i = H_i + Y_i \quad (3)$$

where H_i is the household quality and Y_i is the household income. We define

$$H_i = \theta h_i^f + h_i^m \quad (4)$$

Where h_i^f is the time spent on household work by the female member and h_i^m is the time spent by the male member on household work. In a more traditional family, the importance of woman spending time on household work is more. This is captured by the parameter θ which measures the degree of patriarchy in the family. The greater is the value of θ , the more parochial the family is.

There is a total time constraint. Hence,

$$e_i^f + h_i^f = T \quad (5)$$

We also assume that family income is the sum of the wage earned by the male and the female. Hence,

$$w_i^f + w_i^m = Y_i \quad (6)$$

Usually we can form a game between the husband and wife in determining their strategic choice of work effort. For now, we assume that the male effort choice is historically and socially determined and therefore the woman is left to choose her effort only. Hence, the woman chooses e to maximize the following:

$$U_i = \theta h_i^f + h_i^m + w_i^f + w_i^m \quad (7)$$

subject to equations (2) and (5).

We get the following first order conditions:

$$\frac{\partial U_i}{\partial e_i^f} = -\theta + (e_i^f)^{-\frac{1}{2}} = 0 \quad (8)$$

From this we get,

$$e_i^f = \frac{1}{\theta^2} \quad (9)$$

This leads to the following theorem that

Proposition 2.1 *Work effort (and wage) of a woman is negatively related to the patriarchal value of the family.*

Note that the wage one gets in the equilibrium is the function of θ . Specifically we get

$$w_i^* = \frac{2}{\theta} \quad (10)$$

If the wage of the person i is less than her reservation wage then she will not work. Hence, plugging in equation (10) in the work participation condition $w_i^* > \bar{\omega}$ we find that she will not participate in the work force if

$$\theta \geq \frac{2}{\bar{\omega}} \quad (11)$$

From (11) we can state the following result

Proposition 2.2 *Given the reservation wage, women from a sufficiently patriarchal family will choose not to participate in the labor market. However, this cut off patriarchy level will be negatively related to the reservation wage*

The proposition tells us that a woman from a sufficiently conservative family will choose not to work. However, the cut off level of conservatism will factors determining the reservation wage. Family wealth can be one such factor. For a poor family, reservation wage will be low. Hence, for them it will be more difficult than their rich counterpart to afford their women to sit idle at home. Reservation wage can however, can vary with other parameters such as number of children, family composition etc as well.

3 Data

We have used the India Human Development Survey Data (IHDS) of 2004-05 which is a database formed through a survey of 41554 households in 1503 villages and 971 urban areas for 35 Indian states and union territories conducted by Indian Council of Applied Economic Research (NCAER), New Delhi and University of Maryland. The survey consists of two parts, household questionnaire with household characteristics on demography, health, education, income, work, occupation, production, consumption, assets, social capital, fertility,

children schooling etc. and individual questionnaire with work, income, gender relation, fertility decision, marriage practices, mass media, reading, writing skill etc.

In order to see the impact of family characteristics and family culture on work participation and income of male and female workers we merged the household database with individual level information. The merged database thus pairs the individual information (viz., decision to participate in the labour market) with household level information. Here, we attempt to unravel the influence of household level information like family structure on decision to participate in the labour market for individuals. As discussed in the theoretical section, work effort is likely to depend on the cultural aspects and our main hypothesis is work participation is inversely related with the degree of patriarchies in the family. The IHDS data consists of individual information about total hours of work in a year. This is given by a binary coded variable WORKANY that takes a value one if the individual is working more than 240 hours in a year and 0 otherwise. This has been used as an indicator for workforce participation and effort in the labour market. We use age of the respondent(AGE), education(EDU), households total income(INCOME),IHDS measures total income of households summed across fifty components of income including wages and salaries, property income, net business income, farm income etc. INCOME5 measures the distribution of household income in different quintiles, household asset (HASSET) counts the possession of number of valuable assets, that includes 30 items as goods and housing , sex(M, dummy coded 1 for male 0 otherwise) , caste ($caste_{dum}$)¹ variable grouped as low caste and high caste. In this we follow the specification of the usual earning equation.

The summary statistics of the household characteristics are reported in Table 1. The average asset of sample household is 10.25 and 16.48 for rural and urban respectively. Total annual household income comprise of male female earning from agricultural and non agricultural wage, salary, business, remittances, government benefit, pension etc.

¹Caste dummies have been incorporated as there were significant variation in work participation and patriarchy across caste groups. due to the preponderance of muslim households in the sample(12 percent as against 22 percent of high class), we have considered them as a separate social category as we treat dalit, adibashi and OBC as lower caste.

which is INR 48399.83 for rural and INR 79296.45 for urban households, with average family size of 6.65 and 5.81 respectively. This also implies that per head income in the household is lower for rural areas compared to their urban counterpart. As there are significant differences in asset level and education across rural and urban areas we expect to see these differences being reflected in work force participation as well. Table 2 shows summary statistics for workforce participation and income of male and female workers for rural and urban labour market in India. Average work participation of female workers is 892.63 and 1534.80 in rural and urban areas respectively, which are much lower than their male counterpart of 1409.50 and 2086.25 for rural and urban areas respectively. There is also a sharp gap in the hourly wage rate and annual earning of female and male workers for rural and urban areas in India.

Apart from observing the variations in work force participation across rural-urban areas we disaggregated the latter across occupation as well. We recode IHDS occupation data in three broad groups: white collar employment including service workers, managers and administrative staff, blue collar which includes production and technical workers, and finally a separate group for agricultural labour. Though female workforce participation is much lower than male in each sector, proportion of female workers is 42 per cent in service sector as compared to 15 percent for blue collar jobs which are mostly the technical and production related jobs. In case of agricultural jobs female participation is much higher compared to other sectors. This hints at the presence of occupational sorting in Indian job market.

Our theoretical model shows women from patriarchal family culture will have low workforce participation and low income compared to their male counterpart. The patriarchal culture is an unobservable variable. We use family level information of each adult respondent to identify the variables that reflects patriarchal family culture. We have identified different family level information like decision regarding different family related matters, marriage practices, wife beating, dowry, expenditure and gifts during marriage of male and female members in the family etc.

4 Results

In order to isolate the impact of unobservable patriarchal family culture and values on male-female work participation we construct an index of patriarchy using the decision related information like who is having the most say in the family regarding cooking, marriage, fertility, child illness, expenditure, child marriage. These six decision related variables are coded with 0 for women taking the decision and 1 for male members taking the decision . Combining six most say variable we computed an index of patriarchy in the line of Human Development Index. Here the index can take a minimum value of zero where women take all the decisions and in case male members have the most say the index takes a value of 1 i.e. the maximum value. Thus, higher the value of the index the higher is the level of patriarchy.

$$PI_i = \frac{\mu_i - \underline{\mu}}{\bar{\mu} - \underline{\mu}} \quad (12)$$

where μ_i is the actual number of Most Says in family i , $\underline{\mu}$ is the minimum number of most say and $\bar{\mu}$ is the maximum numbers of most say.

4.1 Work participation and family values

The main result from our theoretical section suggests that the higher the degree of patriarchy in the family. the lower is the labour market participation. In fact, with a sufficiently high opportunity pay, our model suggests that the women from a more patriarchal family is less likely to participate in the labor market. To be precise, our model, given all other controls, predicts negative relation between degree of family patriarchy and work effort and earnings. Table 2 reports the index of patriarchy and workforce participation across sectors. Degree of patriarchy is high for women working in agricultural sector If that be the case then the probability of participation in the labour market is likely to be influenced by the same parochial structure. This amounts to estimating the workforce participation function in terms of the explanatory variables like demography of household like asset level, total income of the household, number of children sex and caste and more importantly the patriarchy index delineated above. The correlation matrix is reported in table 3 shows inverse relation between

patriarchy and hours of work of female workers. This would also allow us to validate the index.

We start by estimating a Probit model of the following form:

$$Pr(wrp_i = 1) = \phi(x_i\beta) \quad (13)$$

Here, denotes household's observed characteristics like number of total assets (NHHasst), income (INCOME5, INCOME), size (NPERSONS), number of children (NCHILD), age of the respondent (Age), education level (Edu) and the unobserved characteristics like patriarchal culture(index of patriarchy, PI) and caste (low caste, high caste, muslim and other) also the location of household (URBAN). This is written as

$$\begin{aligned} wrkp_i = & \beta_0 + \beta_1 Nhhast + \beta_2 THHinc_i + \beta_3 Age_i + \beta_4 Age_i^2 \\ & + \beta_5 Edu_i + \beta_6 HHsize_i + \beta_7 NChild_i + \beta_8 PI_i + \beta_9 caste_i \end{aligned} \quad (14)$$

The Probit estimates are reported at the end in table 4 separately for urban and rural areas. The signs of the coefficients are same for rural and urban areas. We find that asset affects work force participation of both male and female workers negatively in both the rural and urban areas. The number of children negatively affects the workforce participation of the female members in both rural and urban areas. For male members however, the number of children has a positive impact. This is consistent with conventional wisdom. With more children women work more at home and find less time to work outside. But this would mean that income goes down for the family at the time when the need for more income has gone up. Hence, by income effect, male members are more likely to participate in the labor force.

Education on the other hand negatively affects women's work force participation in both urban and rural areas. For their male counterpart in the urban area education has a positive impact. For rural male however, the effect of education is negative but not significant. Our main variable of interest – patriarchy index – has effect that is consistent with our theory. For both rural and urban area, it has positive and significant effect for male members while negative significant sign for the female members. It is worth noting that the differential impact of degree of patriarchy within female members of the household across rural and urban areas. Here, a unit increase in the extent of patriarchy

decreases the chance of work force participation by almost 2 percent in rural areas. While the same increase results in much higher probability of abstaining from the labour market in the urban areas-by 12 percent. Even if this looks counter intuitive, this finding is actually consistent with our conventional wisdom that the level of patriarchy is much higher in the rural areas. Because the level of patriarchy is higher in the rural areas than in the urban areas, the marginal effect is much stronger in the urban areas.

4.2 Wage and family values

The IHDS data has several categories of income like hourly wage in main occupation (wg_{hr}), total annual earning (wg_{yr}), work hours per year (hr_{wrk}). Table 6 reports the male female earnings for each category. In terms of annual earning there exists a significant earning gap between male and female workers in rural areas: the annual earning of male is almost three times that of the female (see table 5 and 6). Though not as pronounced in the rural areas the male earning is almost one and half times that of the female in the urban areas. The same trend is observed for hourly wage as well: here male receives almost twice the female wage per hour in the rural areas while wage gap exists in the urban areas but is relatively less sharp. Table 6 reports mean difference (t-test) of annual earning, hourly wage and hours of work for female and male which shows significant earning gap between male and female workers in India. We consider the following wage function for male and female workers separately (Mincer and Polacheck, 1974). We estimate the following equation separately for male and female

$$w_i = w(Edu, Edu^2, Age, Age^2, PI) \quad (15)$$

w_i denotes the hourly wage for individual i and we do the exercise for male and female separately.

To examine the influence of patriarchal family structure where women face a tradeoff between household commitment and work we estimate the earning equations with hourly wage as the dependent variable . We consider hourly wage depends on education (measured in years), age, experience (we use education square and age square as experience). Table 7 reports Ordinary Least Square (OLS) estimation results of wage across rural and urban areas. Incremental change in education

initially results in lower wage but the second order effects are significant and positive. This indicates that given the level of education skill augmentation fetches higher return across gender. Age and experience has the expected positive sign. Patriarchy has the negative effect on wages for females but it is only significant for rural areas. On the other hand, higher the patriarchal family structure lower is the male wage in rural areas while the direction of causality is opposite and significant in the urban areas.

However, it needs to be seen whether occupational types has a bearing on the wages earned and here we report the estimates across different occupation categories. We form three broad category of occupations from the NIC two-digit occupation classification of IHDS, namely white collar jobs (category 01 to 59) implying administrative, managerial and other service related works, blue collar jobs (NIC category 70 to 99) including all kinds of production related and technical jobs, and agricultural labour (NIC category 60 to 69). Table 8 reports the OLS regression of wage for these three categories of occupation. For all the three occupation categories education is significantly positive for males only while the wage responsiveness of women is significantly affected by the intensity of skill formation that is likely to be captured by the square of the years of education. The positive and significant age coefficient across all the occupational class matches our expectation. It is interesting to note that square of age is negative and significant for females in Blue Collar Jobs as well Agricultural Jobs. While in case of male the coefficient is positive and significant for Blue Collar Jobs and negative and significant for agricultural jobs. These results lead us to some interesting possibilities. First, square of age is likely to reflect experience but it might also capture age related lags in productivity. Our results indicate that there might be an obscured sorting in the Blue Collar Job where females are mostly engaged in manual work and average male participation in decision making is higher. As a result higher age for females would signal their loss in productivity and consequent loss in wages while for male the experience factors would ensure higher return. The index of patriarchy holds a negative sign for female wages across all three occupational class but is significant only in case of agricultural jobs. For males, the sign for the index is positive and significant in case of Blue Collar Jobs but negative and significant in case of agricultural jobs.

The effect of patriarchal family values on wage that we have found runs contrary to the conventional wisdom which suggests that patriarchal family values would leave negative impact on female productivity. However, our result is only partially consistent with this popular belief. We find that in rural areas stronger patriarchal values leaves women less productive where productivity is measured by hourly wage. In the urban areas on the other hand, strong patriarchal values has a positive impact on male productivity. For female, the effect is not significant even though the sign is negative. We suggest that how patriarchal values affect male and female productivities depend on the nature of job. In rural areas, most of the people are engaged in agriculture where the division of labour between male and female are not that strict. Moreover, production site is much closer to the home site compared to urban jobs and both men and women participate in production process. Hence, running home and production together requires more coordination between the male and the female members. Such coordination gets disrupted in presence of more hierarchical values and as a result it adversely affects male productivity as well. This argument finds support in table 8 where we find that in agriculture education negatively affects both and female productivity.

For urban areas however, our result supports conventional wisdom – parochial family values has a positive impact on male productivity. To see this result further we run the same regression for blue and white collar jobs separately and find that for blue collar jobs the result is similar to that for the urban settings. For white collar jobs however, the effects of patriarchal values are not significant for both male and female.

5 Conclusion

The labour market gender discrimination is usually understood from the demand side of the labour market – discriminatory attitude of the employers. The main contribution of this paper is to invoke the family culture for understanding the issue of lower wage and work participation of female workers than their male counterpart. We conjecture that women coming from families with strong parochial values are forced to devote more time for their home management. This leaves less time for work participation and less involvement in more complex

and productive tasks. This explanation, that can at least partially explain the gender gap, is not much discussed in the literature. In this paper we develop a theoretical framework and test its testable implications using IHDS data set. We find that patriarchal family culture negatively affects women's work force participation and productivity. However, there are some variation in the result depending on the location (rural/urban) and type of job. In the next step, we plan to extend the work with more explicit occupational categorization and perform Oxaca-Blinder decomposition using family culture as one of the explanatory variables.

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Table: 1: Characteristics of the sample households in IHDS 2004-05

Household Characteristics	Rural	Urban
Assets of the Household	10.25 (5.30)	16.48 (4.84)
Household Size	6.65 (3.29)	5.81 (2.61)
Total Income of the households	48399.83 (81502.1)	79296.45 (106978.5)
No. of children	2.39 (1.90)	1.83 (1.50)
Highest Education of Adult	6.83 (4.88)	9.81 (4.54)
Highest Education of female	3.61 (4.46)	6.96 (5.23)
Highest Education of male	6.54 (4.83)	9.34 (4.65)
Number of children	2.39 (1.94)	1.83 (1.54)
No. of married female in household	1.52 (0.90)	9.34 (0.75)
No. of married male in the household	1.45 (0.90)	1.31 (0.75)
Age of the respondent	27.11 (19.67)	27.85 (17.84)
Education level of the respondent	3.87 (4.26)	6.55 (5.04)

Based on authors calculation on IHDS data

Table 2: Workforce participation and patriarchy across Occupation:

	Female		Male	
	Hours Worked /Annum	Patriarchy index	Hours Worked /Annum	Patriarchy index
White Collar (01)	1669.44	0.5435	2075.3	0.6416
Blue collar (code3)	1185	0.6146	1776	0.6442
Ag labour (02)	793.45	0.6566	1145.45	0.6747

Table3: Correlation Matrix of female workers for hours of work, Number of household assets, Household Size and Total household Income

	wrkp1	HHASSETS	NCHILD	NPERSONS	RO5	index_~i
wrkp1	1.0000					
HHASSETS	0.3816*	1.0000				
NCHILD	-0.1453*	-0.1450*	1.0000			
NPERSONS	-0.1251*	0.0449*	0.7624*	1.0000		
RO5	0.0711*	0.0946*	-0.2968*	-0.1571*	1.0000	
index_patri	-0.1197*	-0.0886*	0.0879*	0.0597*	-0.0451*	1.0000

Table 4 : Estimation of Work force participation: Probit Marginal Effects

Explanatory Variables	Rural		Urban	
	Female	Male	Female	Male
HHasset	-0.013***	-0.014***	-.005***	-0.02***
NChild	-0.008***	0.003***	-.0005	0.019***
Edu	-0.006***	-0.001	-.001***	0.007***
Age	0.06***	0.097***	.012***	0.11***
Age ²	-.0007**	-.001**	-.0001***	-0.001***
PI	-.018**	0.029***	-.12***	0.013
Caste_dum	0.03***	0.04***	-0.02***	-0.16***
N	56554	58152	28997	29952
LR Chi sq(7)	24030.61***	44344.81***	3357.87***	23512.26
Pseudo R ²	.31	.55	.17	.56
Obs. P	.38	.51	.10	.49
Predicted P	.30	.47	.06	.34

Table 5 Hours of work, hourly wage annual earning and work hours per year:

Variables	Rural		Urban		All	
	female	male	female	male	female	male
Work participation	892.63	1409.56	1534.80	2086.25	1017.30	1666.72
Hourly wage	5.55	10.56	15.86	22.02	7.56	14.92
Annual earning	6853.12	18789.79	30649.03	50162.00	11472.47	30711.85
work hours per year	1132.64	1649.56	1774.80	2326.25	1257.29	1906.72

Table 6: Mean Difference of male and female earning and work hours (ttest):

Variable	Rural			Urban		
	Female	Male	Mean Difference (ttest)	Female	Male	Mean Difference (ttest)
Total annual Earning	6853.12	18789.79	+***	30553.51	49958.48	+***
Hourly wage in job 1	5.55	10.57	+***	15.86	22.01	+***
Work hours/ year	1102.12	1593.80	+***	1257.30	1906.72	+***
Bonus in job1	22.03	82.30	+***	192.45	358.18	+***

Table 7: Estimates of OLS regression for Hourly wage

Explanatory Variables	Rural		Urban	
	Female	Male	Female	Male
Edu	-0.34***	-0.11	-0.60***	-0.75**
Age	0.08***	0.30***	0.61***	0.97***
Edu ²	0.11***	0.11***	0.17***	0.18***
Age ²	0.00	0.00**	0.00***	0.01***
PI	-0.50*	-1.48***	-0.48	4.09***
Edu_PI interaction	-0.34**	-0.34***	-0.19	0.32***
_cons	2.60***	-0.94	-7.93**	17.76**
N	7979	17417	1783	11292
F	307.25***	782.54***	157.18***	988***
R square	0.19	0.21	0.34	0.34

Table 8: Regression results for Hourly Wage across occupation and gender

Explanatory Variables	White Collar Jobs		Blue Collar Jobs		Agricultural Jobs	
	Female	Male	Female	Male	Female	Male
Edu	-0.05	0.67*	-0.13	0.21***	0.07	0.33***
Age	0.47***	0.66***	0.07***	0.25***	0.01***	0.04***
Edu ²	0.13***	0.11***	0.06***	0.05***	0.00	0.00
Age ²	0.03	4.22***	-0.29***	1.98***	-0.62***	-1.05***
PI	-0.19	-0.91	-0.16	0.41***	-0.09***	-0.23***
Edu_PI interaction	-7.09	-15.05***	3.83	1.76***	4.36	5.39**
Constant	-0.05	0.67***	-0.13***	0.21***	0.07***	0.33***
N	886	5073	656	5727	6005	7941
F	61.65***	273.84***	19.98***	247.57***	10.78***	56.71***
R square	0.26	0.22	0.13	0.18	0.1	0.03