

**GENDER BASED DISCRIMINATION IN FORMAL AND
INFORMAL WORK PARTICIPATION: A CASE STUDY
OF DISTRICT LODHRAN OF PAKISTAN**

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Abstract

The main purpose of this study is to know the gender based discrimination in formal and informal work participation in district Lodhran of Pakistan. From 28 Union councils 24 union councils are chosen for study area. A brief questionnaire was developed to cover all aspects of household information living in the rural areas of district Lodhran. Mobility of male members for formal work and number of adult women in house hold are found positively associated with freedom of work to women and female members' mobility in formal work participation. Family size of household and women in veil appeared negatively associated with freedom of work to women and female members' mobility in formal work participation. On the basis of descriptive and econometric results, it can be concluded that gender based discrimination of work participation is exist in rural areas.

Keywords: Gender; Empowerment; Mobility; Participation

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1. Introduction

Gender differentials can be assessed by gender analysis and observing impacts of different policies, programmes and projects on gender. It is recognized that realities of male and female's life are different and if equal opportunities are provided to both then output will be same with little exception (Naqvi and Shahnaz 2002). Gender specific roles, responsibilities and work may be observed by gender analysis. To build a healthy and sustainable country level of participation of both male and female in work at equal extent is essential all over the World.

All over the world, especially in the developing countries like Pakistan, job opportunities are mostly available to men. Male labour force participation is high due to their technical education and trainings. Consequently, proportion of male labour force participation for formal work remains high as compared to women's proportion in labour force participation for formal work. Women's labour force participation rate is very low in formal work due to less opportunities of work available to them. Family responsibilities and discrimination against women work lower the women's labor force participation rate (Dixon 1982).

1.2 Statement of the Problem

Most of the rural women of Lodhran district are involved in informal work and household work only. Culture and mobility affect the women's decision to involve in earning activities or labour force participation of women. As women have equal share in rural and urban population, it is fruitful to assess the gender specific productive role of rural households and to highlight the hidden aspects of productive role of rural female specifically. Evaluation of impacts of cultural factors, mobility and household characteristics on female work participation is the reason behind this study.

1.3 Objectives of the study

This study is aimed to know the affects of gender based discrimination in work participation in Lodhran district of Pakistan. The main focus is on:-

- i- Whether culture and mobility affect the gender specific rural household productive role?
- ii- What is gender specific contribution to income generation of rural households?
- iii- What are the socio-demographic determinants of gender specific mobility for work?
- iv- Is there gender based discrimination in work participation of rural household?

2. Literature Review

Review of relevant literature is necessary to relate the research with the existing knowledge available on the problem under study. A number of studies are presented about the factors affecting women labour force participation, gender differentials and labor force participation decision of women for different areas. It makes us prefer to review these studies.

Naqvi and Shahnaz (2002) have identified the factors related to household which affect the women's participation in economic activities and their empowerment to decide for work. Women's earnings are examined by analyzing human development indicators. According to results married women participated less in economic activities. With increase in education women's involvement in economic activities has increased. Number of children of age 0-5 years and illiterate husbands or household heads negatively affect the women's participation in work.

Fafchamps and Quisumabing (1998) have investigated human capital's effects on the productivity and labour allocation of rural households. Production function was used which included income, labour and variable inputs which affected in variety of ways. Results showed that households with better-educated males earned higher off-farm income and diverted labour resources away from farm activities towards non-farm work. They have concluded that beneficial effect of education accrues mostly to males using market oriented activities as sole criterion. Female education was proved less profitable in rural areas of Pakistan. Human capital effect was most confined to male.

Faridi et al. (2009) investigated that female labour force participation rise with increasing level of education. Logistic regression technique was adopted to estimate the determinants of women's participation in work force. They have observed a positive trend of female labour force participation at different levels of education. Women having technical or professional degrees have the highest probability of participation in economic activities. Presence of household assets, husband's involvement in economic activity and children in early age reduced the probability of women's participation in earning activities.

Hamid (1991) analyzed that women's labour supply was depended on household structure which reflects the socio-economic characteristics of a household and variations in it influence women participation in earning activities. A decline was witnessed in the percentage household containing earning women with the improvement of husband's occupational status. Husband's daily income and number of adult males per household has negatively affected the women's

earning. Household size and number of adult females per household decrease the chances of women's work. Increasing education in different income groups has positive impact on women's participation in working activities.

Anbreen and Afzal (2011) determined the factors which affect the decision of married women to participate in the labour force. Simple regression model was used to observe the impact of explanatory variables on decision of women to participate in labour force. It was found that women's education, family size, number of dependents and children, household expenditures, husband's income, job satisfaction and attitude of spouse and family towards the women's job have positive impact on married women's participation in labour force. Women's age, satisfaction as housewife, restrictions from family, number of adult earners have negative impact on married women's labour force participation decision.

Clark et al. (1991) assessed the impact of culture on women's share of the labour force. It was observed that culture was related to levels of women's share of labour force as well as to changes in those levels. Relationship between various material conditions and changes in women's labour force participation was also examined. It was also observed that women in nations that were dependent upon the export of a single commodity had less share of the labour force. Women of Islamic countries and Latin America had fewer shares in the labour force than women of the other countries.

Verheul et al. (2004) investigated time allocation decision in new ventures of male and female entrepreneurs. Cobb-Douglas production function for utility and profit was used. A non-linear order probit analysis and non-linear least squares regression analysis was used. It was found that individuals have a lower preference for work if they have income from other sources. Having employers and being one's own boss also negatively preference for work. Financial capital experience, contact with other entrepreneurs, number of employees and having other business have positive relation with productivity.

3. Data and Methodology

As need of data is crucial for every quantitative as well as qualitative research and adoption of correct methods to collect the data is also of the great importance in a research work. The methodology of data collection, dimensions of our research analysis, tools being used to

estimate the observations with procedures and the detail of the variables being used in this research will be explored in this section.

3.1 Study Area

District Lodhran has total 28 Union Councils and 24 Union Councils out of them are declared rural. About 80 percent population of Lodhran is living in rural areas. As compared to urban area, income of these rural people is very low. Low literacy levels, unskilled and overall meager facilities provided to them are few main causes of their low income level and poverty. As this study is focused on the gender specific productive role of rural Lodhran so 24 Union Councils of district Lodhran have been chosen as the study area and 15 villages from 5 sampled Union Councils were selected.

3.2 Sampling Technique

As it is described earlier that 24 Union Councils of district Lodhran out of 28 are rural, so these 24 rural Union Councils were the study area. By taking twenty percent random sample of those Union Councils 05 Union Councils were selected. Each selected Union Council was having six to twelve villages on average. By adopting simple random sampling 03 villages from each selected Union Council were selected. Finally 15 villages from 05 Union Councils were the sample size of the study. From each village 25 households were briefly questioned on the prescribed format. Total 352 rural households of district Lodhran were questioned. Keeping in view the equal share of male and female in the population 176 selected respondents were female and 176 were male respondents.

3.3 Study Design

A brief questionnaire was developed to cover all aspects of household information living in the rural area of district Lodhran. Questionnaire was categorized in sections as:

- i- Information of Household Head.
- ii- Total family members male and female with their age.
- iii- Description of cultural variables.
- iv- Detail of male members involved in Formal Work.
- v- Detail of Female members involved in Formal work.

vi- Members of household involved in Informal work.

3.4 Estimation and Procedures

This study has tried to focus on the gender mobility, cultural differences and gender based discrimination in work participation. To estimate the effects, following functions are used in this study.

3.4.1 Women's freedom to work function

Binary Probit Quadratic hill climbing model is used to observe the effect of different variables on that cultural variable. It is hypothesized that the families who gave freedom to their women for participation in jobs or formal work are more likely to have better per capita income.

(FREE_W) = f (AGE_HH, EDU_HH, FORMAL_M, M_MOVE, SEX_HH, W_EDU, W_VEIL, INFORMAL_M, N_ADWO, F_SIZE, PC_INCM)

Model 1

FREE_W = $\beta_0 + \beta_1$ AGE_HH+ β_2 EDU_HH+ β_3 FORMAL_M+ β_4 M_MOVE+ β_5 SEX_HH+ β_6 W_EDU+ β_7 W_VEIL+ β_8 INFORMAL_M+ β_9 N_ADWO+ β_{10} F_SIZE+ β_{11} PC_INCM

Where

- FREE_W = Freedom of work for women
- AGE_HH = Age of the head of the household.
- EDU_HH = Education level of the head of the household
- F_SIZE = Family size of the households.
- W_EDU = Any women educated in the household.
- SEX_HH = Gender of the head of the household.

FORMAL_M	=	Total number of male members of a household involved in formal sector work.
INFORMAL_M	=	Total number of male members of a household involved in informal sector work.
M_MOVE	=	Mobility of male members of a household, any male move for formal work.
N_ADWO	=	Number of adult women in a household
PC_INCM	=	Per Capita Income of a household.

3.4.2 Female formal work participation Function

(FORMAL_FM) = f (AGE_HH, EDU_HH, FORMAL_M, M_MOVE, PC_INCM, SEX_HH, W_EDU, W_VEIL, N_ADWO)

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Model 2

FORMAL_FM = $\beta_0 + \beta_1$ AGE_HH+ β_2 EDU_HH+ β_3 FORMAL_M+ β_4 M_MOVE+ β_5 PC_INCM+ β_6 SEX_HH+ β_7 W_EDU+ β_8 W_VEIL+ β_9 N_ADWO

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3.4.3 Female Informal work participation Function

(INFORMAL_FM) = f (AGE_HH, EDU_HH, INFORMAL_M, M_MOVE, N_ADWO, PC_INCM, SEX_HH, W_EDU, W_VEIL)

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Model 3

INFORMAL_FM = $\beta_0 + \beta_1$ AGE_HH+ β_2 EDU_HH+ β_3 INFORMAL_M+ β_4 M_MOVE+ + β_5 N_ADWO + β_6 PC_INCM+ β_7 SEX_HH+ β_8 W_EDU+ β_9 W_VEIL

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Table 1: Definitions of Dependent and Independent Variables

Variables	Definitions	Values
PC_INCM	Per Capita Monthly Income of a family	It is measured in Rupees
FREE_W	Freedom of work to Female	= 1 if female has freedom to participate in formal work = 0 if female has no freedom to participate in formal work
FM_MOVE	Female mobility	= 1 if female move for formal work participation = 0 if female not move for formal work participation
FORMAL_FM	Female involved in formal sector work	Number of females involved in formal sector work
INFORMAL_FM	Female involved in Informal sector work	Number of females involved in Informal sector work
EDU_HH	Education of the head of the household	= 0 if household head is illiterate = 1 if household head is literate = 2 if household head is middle pass = 3 if household head is matriculate = 4 if household head is intermediate pass or above
AGE_HH	Age of the head of the household	Age in years
F_SIZE	Total Family size	Family size in numbers
FORMAL_M	Male involved in formal sector work	Number of males involved in formal sector work
INFORMAL_M	Male involved in Informal sector work	Number of males involved in Informal sector work

M_MOVE	Male Mobility	= 1 if male move for formal work participation = 0 if male not move for formal work participation
W_EDU	Women education trend	= 0 if no one adult women is literate in household = 1 if any one adult women is literate in household
SEX_HH	Sex of the head of the household	= 0 if household head is a male = 1 if household head is a female
W_VEIL	Women wearing veil	= 0 if women does not wearing veil = 1 if women wearing veil
N_ADWO	Number of adult women	It is measured in numbers

4. Results and Discussions

This section is formulated to discuss the empirical investigation and their outcomes, both descriptively and econometrically. Thus there are two main parts of this section, one comprises of descriptive analysis of the study and other is the econometric analysis of the research.

4.1 Descriptive Analysis:

Descriptive statistics is one of the most eminent methods to explain the trends in qualitative variables in primary data based studies. Major aspect of this study is to quantify the role of women in household productivity.

4.1.1 Women's Freedom of Work

Women in our society are largely dependent on men in their decision making. Thus in order to quantify the women productive role, one of the basic factors is, whether women are allowed to work or not. This is measured by the variable, freedom of work to women and valued one if women have freedom of work and zero otherwise. Descriptively, there are 179 households out of 352 in which women have freedom to work. Thus 51 percent households in the population allowed their women to work. In the following table, it has been tried to explain the descriptive relationship between the variable freedom of work and other socio-demographic variables.

Table 2 Freedom of work to women and education of the head of the household.

FREE_W	FREE_W (0): No Freedom to work		FREE_W (1): Freedom to work		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
0	61	35% (40.4%)	90	50% (59.6%)	151	43%
1	38	22% (50.7%)	37	20.7% (49.3%)	75	21%
2	31	18% (69%)	14	7.8% (31%)	45	13%
3	25	14.5% (54%)	21	11.7% (46%)	46	13%
4	18	10.4% (51%)	17	9.5% (49%)	35	10%
Total	173		179		352	100%

It is quite evident from table 2 that 43 percent heads of the household are illiterate out of which 59.6 percent allowed their women to work. While 40.4 percent did not allow their women to work. As Lodhran has very low literacy rate so conversely it is evident that 50 percent households are illiterate and they also gave permission to their women for work. With different level of education, 20.7 percent literate or primary pass household heads allow their women to work, 7.8 percent middle pass allow their women to work. For matriculate and intermediate pass household the percentage is 11.7 and 9.5 respectively.

Thus it is clear from the table that education level of the head of the household did not have such a positive effect on the freedom of women to work. Majority of the head of the households are illiterate and surprisingly in families where head of the household are less educated are providing more freedom to their women to work. A main cause of that no effect of education of head of the household may be the overall poverty level prevailed in most of the households, non-working status or low wage job of the illiterate head of the household. These factors allow the women of such kind of families automatically for work. Values in parenthesis

show the frequency percentage of households from total frequency and it belong to specific categories mentioned in the table.

Table 3 Freedom of Work to Women and Women Education Trend.

FREE_W	FREE_W (0): No Freedom to work		FREE_W (1): Freedom to work		Total	
	W_EDU	Frequency	Percentage	Frequency	Percentage	Frequency
0	68	39% (44%)	88	49% (56%)	156	44%
1	105	61 (54%)	91	51% (46%)	196	56%
Total	173		179		352	100%

Table 3 shows that cross analysis between freedom to work of women and women education trend of a household. Women education shows the overall trend of woman education in a household. It is quantified as 1 if any one literate woman is present in a household and zero if all women of a household are illiterate. There are 44 percent households in which all the women are illiterate and 56 families have at least one literate woman.

Respectively 51% families having literate woman allow their women to work and 49 percent families of totally illiterate allow their women to work. Respectively 39 percent families with illiterate women did not allow their women to work and 61 percent families with at least one literate woman did not allow their women to work. It is also calculated that overall 46 percent families having one literate woman gave freedom to their women to work and 54 percent families with all illiterate women give freedom to their women to work. The overall trend represent that there is no significant effect of women education trend on their freedom to work. One of the reasons for those results may be involvement of illiterate women in labour work.

Table 4 Freedom of Work to Women and Women Veil (Purdah).

FREE_W	FREE_W (0): No Freedom to work	FREE_W (1): Freedom to work	Total
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W_VEIL	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
0	48	28% (23%)	162	90% (77%)	210	60%
1	125	72% (54%)	17	10% (12%)	142	40%
Total	173		179		352	100%

Veil is an important cultural variable and valued one if women of a household are wearing veil and zero otherwise. The table 4 shows that in 60 percent households there is no restriction of veil and women belonging to 40 percent families are wearing veil. Women wearing veil belong to 72 percent families where they have not freedom to work and only 10 percent of families in which women wearing veil and they also have freedom of work. Relatively, 90 percent families in which women not wearing veil are independent for work as compared to only 28 percent not wearing veil and also not have freedom to work. So it is evident from the table that women who wearing veil are subject to more social restrictions regarding their freedom to work.

Table 5 Freedom of Work to Women and Male Mobility for Formal Work Participation.

FREE_W	FREE_W (0): No Freedom to work		FREE_W (1): Freedom to work		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
0	48	28% (55%)	39	22% (45%)	87	25%
1	125	72% (47%)	140	78% (53%)	265	75%
Total	173		179		352	100%

The cross tabulation in table 5 shows the trends between women freedom to work and male mobility for formal work. Male mobility is valued one if any one of the males of a

household work outstation and is zero otherwise. Table shows that male movement for work is 75 percent out of which 53 percent belonging to those families who give their women freedom to work. In other words the women having freedom to work 78 percent of them belong to that household of which at least one male work outstation. Respectively, 25 percent households have no mobility for their males and 55 percent of them did not allow their women to work. It is concluded from the table that male mobility for formal work have positive influence on women's freedom for work.

4.1.2 Female Mobility for Work Participation

Whereas, female mobility for formal work participation has much more importance to determine their productive role, furthermore, female movement for work participation is not such an independent factor from other aspects. Following tables presented under are objected to determine association of female mobility for work with other socio-cultural and demographic variables.

Table 6 Female Mobility for Formal Work and Education of the Head of the Household.

FM_MOVE	FM_MOVE (0): Not move for work		FW_MOVE (1): Female Move for work		Total		
	EDU_HH	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
0		106	41% (70%)	45	48% (30%)	151	43%
1		57	22% (76%)	18	19% (24%)	75	21%
2		38	15% (84%)	7	8% (16%)	45	13%
3		32	12% (70%)	14	15% (30%)	46	13%
4		26	10% (74%)	9	10% (26%)	35	10%
Total		259		93		352	100%

The cross analysis shows that education of the head of the household is not significantly associated with female movement for work participation. In the sample population 43 percent heads of the households are illiterate and only categorically only 30 percent of their females are moving for work participation but 70 percent are not moving for formal work. Respectively with all levels of education of the head of the household the same pattern is prevailing as depicted in the table 6. Out of 352 households females belonging to 93 household are moving for work participation and 259 household females are not moving at all for any kind of formal work.

Table 7 Female mobility for formal work and trend of women education of that household.

FM_MOVE	FM_MOVE (0): Not move for work		FW_MOVE (1): Female Move for work		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
0	109	48% (70%)	47	51% (30%)	156	44%
1	150	58% (77%)	46	49% (23%)	196	56%
Total	259		93		352	100%

In table 7, the cross analysis between female mobility in formal work and women education level is depicted. The females which are moving for work participation 51 percent of them illiterate and 49 percent are literate. Respectively, the females that are not mobile for their formal work participation 42 percent of them are illiterate and 58 percent of them are literate. Results may be justified in the rural area like Lodhran. Household poverty may contribute as an additional factor to influence the female movement and also associated with women education trend.

Table 8 Female mobility for formal work and cultural factor of women veil (Purdah).

FM_MOVE	FM_MOVE (0): Not move for work		FW_MOVE (1): Female Move for work		Total		
	W_VEIL	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
0		122	47% (58%)	88	95% (42%)	210	60%
1		137	53% (96%)	5	5% (4%)	142	40%
Total		259		93		352	100%

Table 8 shows that 60 percent women did not wear veil while 42 percent of them are mobile in their formal working and 58 percent are immobile. On the other hand in 40 percent households wear veil and only 4 percent of them are mobile in their formal working while 96 percent are immobile in their formal working. Thus it can be said quite conveniently from the analysis that the women in veil are intentionally subject to have more constraints regarding their mobility for formal work participation.

5. Econometric analysis

In this section the econometric analysis of model 1 and model 2 are presented.

5.1 Econometric analysis of Model 1

A logistic regression analysis is applied in this model to estimate the determinants of women freedom to work. In order to find the results binary logit regression technique is applied by using E-Views software.

Women freedom to work is taken as dependent variable and as explained above, valued 1 if women have freedom to work otherwise zero. Respectively, Age of the head of the household, education of the head of the household, males working in formal sector, male mobility to formal work, sex of the head of the household, women education, women veil, male working in informal sector, number of adult women in a household, family size of household and per capita income are taken as independent variable.

Table 9 Regression Estimates with freedom of work to women as dependent variable.

Variables	Description	Estimates
	Constant	0.779 (1.948)
AGE_HH	Age of the head of the household	-0.000 (-0.022)
EDU_HH	Education of the head of the household	-0.081 (-1.200)
FORMAL_M	No of Males involved in formal work	-0.111 (-0.748)
M_MOVE	Male Mobility for formal work participation	0.321 (1.635)**
SEX_HH	Sex of the head of the household	0.398 (1.438)
W_EDU	Trend of women education in the household	0.200 (1.134)
W_VEIL	Women wearing veil	-1.965 (-10.987)*
INFORMAL_M	No of Males involved in Informal work	0.160 (0.591)
N_ADWO	Number of adult women in household	0.315 (2.168)*
F_SIZE	Family size	-0.107 (-2.109)*
PC_INCM	Per capita income of household	-1.14E-05 (-0.261)
McFadden R-Squared = 0.354		
LR statistics = 172.513		
DF = 11		
P = 0.000		
N = 352		

Note: * represent significance level at 5 percent and ** at 10 percent.

This model is objected to estimate the influence of social, cultural and demographic factors on freedom of work to women. M_MOVE is found positively associated with freedom of work to women. The statistics represent that with male members' mobility in formal work, the chance of women freedom to work increased by 32 percent. Thus logically it is clear that the persons who have to work somewhere outstation they have to give freedom to their women for work.

W_VEIL is observed to have strong negative influence on the freedom of work to women. Thus statistically women wearing veil causes 1.96 units decrease in estimated logit with z-statistics - 10.987 and significant at even 5 percent, which shows the strong effect of women veil on their freedom of work. Resultantly, the families where women are wearing veil are very more restricted for not working.

N_ADWO has positive effect on women's freedom to work. Having one additional adult female in a household caused to increased chance of freedom of work to women by 31 percent. Hamid S. (1991) also found positive effect of increasing number of adult women on women work participation. Theoretically, the results are significant with Azid et al. (2001).

F_SIZE appeared negatively associated with freedom of work to women. Estimates show that one unit increase in family size caused 0.106 units decrease in freedom of work to women. The factor behind is the male dominated society in rural areas and especially in case of large size of women. This added to women confinement only to indoor household services. Thus increase in one family member caused 10 percent decrease in chances of freedom of work to women.

However the value of pseudo R-square which is called McFadden R-squared is 0.35 which explains that all the independent variables caused 35 percent variation in dependent variable. The LR statistics produced at df 11, (LR statistics = 172.513) is significant at the level of 0.000 significance. The probability level 0.000 means that the chances are almost zero that the results of regression model are due to random events instead of a true relationship. Furthermore, the signs of co-efficient of the variables are according to expectations.

5.2 *Econometric analysis of Model 2*

As this study revolves around the gender specific productive role with special focus on female productive role so this model is constructed to determine the productive role of women members of a household by observing the female members' participation in formal sector work. The dependent variable is number of female members of a household working in formal sector.

To observe the influence of culture, gender mobility and other socio-demographic variables on women work participation some independent variables are used like age of the head of the household, education of the head of the household, number of males involved in formal sector work, male mobility for work participation, per capita income of the family, sex of the head of the household, trend of women education in a household, women veil and number of adult women in a household.

An Ordinary Least Square regression method is applied to estimate the outcomes through use of E-Views version 5 windows. A multiple multivariate regression analysis is applied. In order to fix the problems of multicollinearity and heteroskedasticity, variables depicting high correlation with other variables are excluded from the model. White heteroskedasticity-Consistent Standard Error and Covariance test is also applied.

Table 10 Regression Estimates with Female member participation in Formal Work as dependent variable.

Variables	Description	Estimates
	Constant	0.197 (1.482)
AGE_HH	Age of the head of the household	0.007 (2.056)*
EDU_HH	Education of the head of the household	-0.007 (-0.314)
FORMAL_M	No of Males involved in formal work	-0.181 (-3.098)*
M_MOVE	Male Mobility for formal work participation	0.116 (1.944)*
PC_INCM	Per Capita Income of household	1.96E-05 (1.456)
SEX_HH	Sex of the head of the household	0.170 (1.741)**
W_EDU	Trend of women education in	0.068 (1.114)

	the household	
W_VEIL	Women wearing veil	-0.531 (-9.753)*
N_ADWO	Number of adult women in household	0.177 (2.717)*
R Square	= 0.252	
F	= 11.504	
Standard Error	= 0.555	
N	= 352	

Note: * represent significance level at 5 percent and ** at 10 percent.

This model is used to observe the productive work of women members and variables influence it, as dependent variable is women participation in formal work and valued as number of women involved in formal work, so a linear regression method is adopted in this model. Education of the head of the household and per capita income of household are found insignificant in the econometric analysis. Surprisingly, education trend women were also found insignificant. The factors behind the unexpected results are the overall low literacy rate of women in the area of study. Women who are working in formal sector are intensively involved in labour work and that labour work not requires any education. So the effect of education of women or female members of a household may be insignificant in such type of rural areas. Variables that are significantly influence the women involvement in formal sector work are discussed as follows.

Age of the head of the household: Age of the head of the household has positive influence on women formal work participation. Effect is not high but significant. Approximately, 7 percent influence of one additional year of household was observed on female work in formal sector.

Male members involved in formal work: This variable negatively influence the female members involved in formal work. Statistically one additional male member participation in formal work caused 18 percent decrease in female members involved in formal work. As it is obvious that the families where one or more male members are working for income generation there are very few chances of female involvement in formal sector work and the results are justified in the rural area like Lodhran.

Male mobility: A positive relation is witnessed between the male mobility for formal work participation and female members involved in formal work for a household. Male movement for formal work participation has brought about 12 percent positive variations in female work participation in formal work. Male members of a household if move for their work or work outside their home stations are influencing the female members participation positively.

Sex of the head of the household: It also influence the female involvement in formal work positively. About 17 percent influence of sex of head of the household is observed on female involvement in formal work. As value 1 is given to the female headed households so female heads have positive effect on female involvement in formal work. In rural areas where females are heads of the households, females are more likely to involve in formal work, because either the female head is involve in formal work or she motivate and allowed her other women of her family to work in formal sector.

Women Veil: This variable is included for observing the effect of culture and customs on the productive role of female. Statistics show that women veil has very strong negative impact on female involvement in formal sector work. Women veil about 53 percent negatively affect the women involvement in formal work. It is obvious that outside the home veil is a negatively affect women work participation. Especially in rural areas like Lodhran, this cultural institution is largely prohibiting women work outside the home.

Number of adult women: This variable has positive effect on women work participation in formal work. With addition of one adult female member in a household causes to increase 18 percent chances of female involvement in formal sector work. This positive relation represents the productive role of women in a household.

5.3 *Econometric analysis of Model 3*

This model is also used to estimate the productive work of women members within the boundaries of home. An Ordinary Least Square model is used. An Ordinary Least Square regression method in applied to estimate the outcomes through use of E-Views version 5 windows. A multiple multivariate regression analysis is applied. In order to fix the problems of multicollinearity and hetroskadesticity, variables depicting high correlation with other variables are excluded from the model. White hetroskedasticity-Consistent Standard Error and Covariance test is also applied.

Women participation in informal work is valued as number of women involved in informal work, so a linear regression method is adopted in this model. Variables like age of the head of the household, education of the head of the household, male members involved in informal work, male mobility, number of adult women, per capita income of household, sex of the head of the household, women education trend and women veil are used as independent variables.

Table 11 Regression Estimates with Female member participation in Informal Work as dependent variable.

Variables	Description	Estimates
	Constant	0.349 (2.387)*
AGE_HH	Age of the head of the household	-0.001 (-0.356)*
EDU_HH	Education of the head of the household	-0.029 (-1.314)
FORMAL_M	No of Males involved in formal work	0.026 (0.479)
INFORMAL_M	No of Males involved in Informal work	0.179 (1.093)
M_MOVE	Male Mobility for formal work participation	-0.014 (-.204)
PC_INCM	Per Capita Income of household	-1.54E-05 (-1.776)**
SEX_HH	Sex of the head of the household	-0.156 (-1.999)*
W_EDU	Trend of women education in the household	0.081 (1.318)
W_VEIL	Women wearing veil	-0.035 (-0.571)
N_ADWO	Number of adult women in household	0.073 (1.571)

R Square	=	0.252
F	=	11.504
Standard Error	=	0.555
N	=	352

Note: * represent significance level at 5 percent and ** at 10 percent.

Objective of the study is to determine the gender specific productive role and effect of culture and mobility on it with special reference of female productive role of a household in rural areas. Female involvement in informal sector work has also quite importance. To observe the female participation in informal work and factors affecting it, a variable female members involved in informal work is used as dependent variable. All the above mentioned independent variables are found insignificant except the variables Per capita income and sex of the head of the household. Both of these variables negatively affect the women's participation in informal sector work. The reason behind the results may be the very low income generated by these informal works. And if the head of the household is female then she has a very much chance to involve in formal work therefore negative sign shows that if a woman is the head of the household then she would obviously involved in formal work instead of informal work.

6 Conclusion and Policy Recommendations

It is revealed during the descriptive analysis that only cultural factors have significant influence on women's freedom of work. Again for female mobility cultural factors contribute more toward it than the household characteristic factors. On the basis of descriptive and econometric results, it can be concluded that culture and mobility strongly affect the women's role in rural areas. Some household characteristics have positively affected the women's work participation and some have negative effect on it. So it is found that gender based discrimination is exist regarding work participation. Keeping in view the estimated results, followings are the some policy recommendations in this regard.

- i- Proper utilization of human and financial resources should be made and awareness should be given to female for entry into labour markets. This will enhance the status of females in the home as well as in society.

- ii- Relevant experience and knowledge for new ventures should be given to the persons especially to women who are ready to involve in some kind of business.
- iii- Minimum wage legislation should be rationalized in that changing economic conditions and should be also further reviewed for real wages.
- iv- Informal sector should be organized and private sector should also take steps for establishment of agro based industries.
- v- To improve the living conditions for the poorest individuals, women must be drawn into the economic mainstream. This would entail increasing female participation rates in educational and training programmes, formal sector employment and agricultural extension programmes.
- vi- It is also of primary importance that precautions should be taken to ensure that women have equal access to government resources provided through schooling, services, employment and social security programmes.
- vii- Legalizing informal sector employment where the majority of the female labour force is employed would also improve the economic status of women.
- viii- Barriers to women's direct involvement in technical training programmes and extension services must be eradicated.
- ix- Provision of affordable child-care and family planning services should be provided to women as this would lighten the burden of women's reproductive roles and permit them a greater degree of economic participation.
- x- Direct access to credit and inputs should be given to women so that they will be able to start different projects.
- xi- Policy design should ensure that whether women get equal benefits from development efforts.

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