SOCIO-ECONOMIC DETERMINANTS OF HOME BASED AND OUTDOOR WOMEN WORKERS IN PAKISTAN

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Received: 28 March, 2024 Revised: 28 April, 2024 Accepted: 19 May, 2024 Published: 28 May, 2024 ABSTRACT

This paper analyzes the influence of socio-economic factors on women's decision to participate in economic activities as home based or outdoor worker. For empirical analysis, cross-sectional data is collected from 1227 working women from Multan Division, Pakistan. The binary logistic regression model is used and results concluded that the probability of opting home based work decreases with an additional year of education. Various factors such as; age, presence of disease, head of household, household size, children under age 5 years, domestic responsibilities, restrictions to achieve education, self-employment, work less than 35 hours per week, worker satisfaction, ownership of assets, and distance from home to district headquarter are positively related with women participation decision to be home based worker. While factors like; number of dependents, children aged 5-15 years, outside work permission, working as employee, work more than 34 hours per week, cooperative attitude, labor laws, urban location, and joint family setup have negatively influenced the women decision to work from home. The results suggest that human capital should be on top priority by allotting extra resources for education, health and vocational trainings to improve the decent work opportunities for home-based workers, outdoor worker

1 INTRODUCTION

Economic participation of women is a much debatable subject among economists and researchers. Female labor force participation (FLFP) significantly contributes in socio-economic development of any country (Edirisinghe, 2016). Women being half of the Pakistan's population can play vital role in development of the country and it is crucial to analyze their role in economy. <u>Pakistan</u> has the largest labor force and manpower in the world. The total number of Pakistan's <u>labor force</u> is 68.75 million in 2018-2019 which increases to 71.76 million in 2020-2021 (Pakistan Labor Force Survey, 2020-2021).

Labor force is considered as a key factor and an asset for economic growth through the channel of improved productivity. Women in Pakistan's labor force play different tasks such as, motherhood, wife in the household as well as income earner and also seen as contributing in the formal and informal sector. Most of the women activities are carried out in the informal sector. Informal work is more convenient for some women workers because there are no restrictions on employer and workers and they are free to choose their work according to their own will. With the growing decentralized production processes and globalization, work from home appeared as a considerable component of informal economy (Hassan & Azman, 2014).

The term home based worker has different empirical concept. In Asia, it is defined as the range of people, mostly women, who work from home irrespective of their exact conditions of work while in developed countries, it is defined as "piece-rate" workers who get work through middleman (Cunningham & Gomez 2004). According to the International Labor Organization (2002), homebased workers are those who carry out remunerative work inside their homes or in their neighborhoods

within informal or unorganized sector. Generally home-based workers are categorized as selfemployed (own-account worker), who work on their own or in family enterprises, buy their own raw materials, and sell their own finished goods, mainly to local customers and buyers; subcontracted (industrial outworkers or piece-rate worker), who work for others sourced from subcontractor, agent or middlemen typically on a piece-rate basis because they do not buy their own raw materials or sell their own finished goods. Almost all home-based workers whether self-employed or subcontracted earn very low piece rate wages that vary according to gender, age, marital status, location, work sector and many other variables (Chen, 2014).

The main reason to be a home-based worker is to have flexible and balanced life-work (Wynarczyk & Graham, 2013). Hassan and Farooq (2015) found that 83.8 % women feel comfortable with work from home as they discharge their domestic chores and child care responsibilities and mainly, they are not allowed to work outdoor. It is reported that more than 100 million workers worked from home around the world, above half a million working in South Asia, and majority of them (80%) are women workers (HomeNet Pakistan, 2005). Their number is rapidly increasing due to numerous. elements including the change in economic trends from formal economy to informal one, lack of opportunities in formal sector, escalated prices of the basic necessities of life, poverty, unemployment, social constraints, cultural norms and growing practice of outsourcing (Punjab Home-Based Workers Survey, 2016).

After the Insight of aforesaid observations, the aim of present study is to investigate how various socio-economic and demographic variables affect the women decision to participate in home-based or outdoor work. The study highlights the problems of home-based workers and also propose recommendations to improve their living standards and healthier utilization of their resources for the economic development of Pakistan.

2 Literature Review

Edwards and Hendrey (2002) explored the factors of home-based work and participation decision of women in labor market. The study concluded that it is attractive for women to work from home if the fixed costs of home-based work (being married, having children under age 6, disabled, and belongs to rural areas) is lower than the fixed costs of on-site work. In a survey-based study (Nazly et al., 2004) estimated that more than half (58.7 percent) of homebased women workers are uneducated however they are familiar with exploitation by the middleman while 10 percent are unaware of their exploitation.

Unni and Rani (2005) found that in the scheduled castes, the participation of women, both inside and outside the home, is higher as expected while the participation of Muslim women is low for both who work at home and outside the home. The probability of a Muslim woman to participate in work outside the home is significantly lower than to participate in home-based work. The difference is not significant for the scheduled castes where women tend to work equally outside or inside the home. In another study, Uma and Unni (2009) argued that female home based work increases due to rise in unit cost of labor. According to Hiralal (2010) most of the women in South Africa aged 20-29 years are involved in home-based work when they complete high school as they are mostly single parent, unmarried and living with unemployed parents. Moreover, women in the age group of 20-35 years attain 12 years of schooling but are unable to get tertiary education due to economic hardships and poverty.

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Meidika et al., (2019) investigated the factors that influence the decision of married women to be a home-based worker in Indonesia. The findings of the study concluded that as education level improves, the likelihood of married females having internet access to participate in home-based work increases in first model while in second model with no internet access married females has a better opportunity to do homebased work. The study also found that married

women in age group of 15-24 and 25-39, having children less than age 5 years, employed head of household, employed as sales and service worker, work training experience, and self-employed on industry sector, participate more in home-based work in both models.

Kumar and Mishra (2019) examined the factors which affect the worker's participation in home based work in India. It is found that workers preferred to work from home once the loss in joint household production of working outside the home is high. The increase in age and level of education decreases the likelihood of workers to participate in home-based work while women who belong to scheduled caste and tribe have greater probability to engage in home-based work in comparison to outdoor work and out of labor force in 1999-2000 however the effect is negative in 2010-2011. The study showed that self-employed women participate more in home-based work because strict social and cultural norms limit them to work from home. Moreover, Muslim females do participate more in home-based work opposite to non-Muslim.

Shahid, et al. (2020) analyzed the socio-economic profile of home-based women workers working in shoe making industry in Lahore. The study concluded that most of the respondents are illiterate and have no knowledge about existing organization working for home-based workers. A vast majority of women (93.0 percent) is working as piece rate workers with 1-5 years of work experience (39.5 percent), while 31.0 percent women are working for more than 11 years. Mostly women (90.9 percent) are found to start their work before marriages to increase the household income (59.7 percent) and 84.5 percent get training for work. The study also found that respondents are receiving very low wages as more than half of women (55.0 percent) were receiving only Rs. 1500-5400 as total familial income per month while they are working 6-8 hours per day and most of them are satisfied with their work.

Although different aspects of home based and outdoor women workers have been examined and reported. But there is a gap in literature since only few studies looked into home-based women workers particularly, with social and economic perspectives in Pakistan in a detailed empirical manner. To the best of the analytical outlook of the literature, this study is pivotal to empirically investigate the determinants of home-based and outdoor women workers specifically in Multan Division. This study further adds by explaining the current issues and problems of these home based women workers as well as their working conditions in Multan Division.

3 Data Sources and Methodology

3.1 Data Source

For the analysis, the cross-sectional data is collected from Multan Division, which is based on mixed rural and urban blend. The target population included working women both home based and outdoor aged 15 years and above. A sample of 1227 working women was considered for analysis. The purposive sampling technique is used as the researcher depends on her own judgment while choosing the members of population to take part in the current study. Required information from the respondent is obtained through questionnaire and it is consisted of questions which were based on multiple choices and open ended. Apart from getting the information required through the questionnaires specific interviews were also conducted in their homes and at the place of their work.

3.2 Methodology

For the estimation of the women participation in home-based or outdoor work the binary logistic regression analysis is applied. The dependent variable (PDW) has two categories '0' and '1' where 1 indicates "home-based worker" while 0 shows the "outdoor workers". To analyze the binary response variable Logit model is used, as it appears in the form of normal cumulative distribution function (Berndt, 1990; Gujarati, 1995; & Greene, 1992).

Consider a model assuming the cumulative probability density function:

$$p = \frac{1}{1 + e^{(-\beta X_i)}}$$

where 'P' indicates probability of women to participate in home-based work or outdoor work which takes the values '0' and '1', β is the row vector of the parameters and " X_i " is the column vector of the variables and 'e' be the exponential term.

Following regression equation has been easily derived from the logistic probability equation:

$$\ln(odds) = Ln\left[\frac{p}{1-p}\right] = Y_i$$
$$= \beta_0 + \beta_i X_i + \dots + \beta_n X_n$$

This equation represents the Logit model. Here, odds refer to the odds of Y_i being equal to 1.

Odds can be defined as the ratio of probability of belonging to one group to the probability of belonging to the other [odds p/(1-p)]. The binary logistic regression analysis indicates the change in odds resulting the unit change in the predictor. They are the odd ratios of the predictor.

3.3 Model Specification

In order to investigate the impact of various human capital, socio-economic, and demographic variables on woman participation decision as home-based worker or outdoor worker, two models are estimated. PDW = $\alpha + \beta_1$ EDU + β_2 DISE + β_3 EDM + β_4 EDF + β_5 EDH + β_6 HOH + β_7 HHSZ + β_8 NDP + β_9 CHAI + β_{10} CHAII + β_{11} DOMR + β_{12} ASST + β_{13} REDU + β_{14} OWP + β_{15} AGEII + β_{16} AGEIII + β_{17} AGEIV+ β_{18} AGEV + β_{19} MRS + β_{20} FSP + β_{21} DIST(1)

4 Descriptive Analysis

Table 1 shows the descriptive statistics (mean and standard deviation) for home-based and outdoor women workers of Multan division. The average age of woman who work from home and outside the home is 37.7 years and 36.5 years while standard deviation is 10.5 and 9.79. The mean value of education of home based worker is 3.93, with maximum 14 years of education and outdoor workers is 9.74, with maximum 18 years of education. With low level of education women are more likely to engage in home-based work than outdoor work. As the level of education increase their participation in outdoor work increases due to better job opportunities in high paid occupations. However, the deviation of education from its mean is 4.31 and 6.31 as shown by the value of standard deviation. Similarly, the mean and standard deviation of presence of disease is 0.42 and 0.49. The mean value for education of closed relatives mother, father, and husband is 1.02, 3.46, and 3.82 for home-based workers while 4.28, 8.06, and 6.59 for outdoor workers. On average 0.19 home-based workers are head of household and 0.15 outdoor workers are household head. The mean value for household size

of home based workers is 6.38 and outdoor worker is 6.10 while standard deviation is 1.92 and 2.04. In case of home based worker, the mean value for number of children and number of dependents is 1.85 and 2.53 while for outdoor work the mean value is 1.56 and 2.82. On average 0.56 home based women workers are restricted to achieve education and 0.19 women have permission to work outside the home. While for outdoor worker, on average only 0.17 women face restriction to achieve education and 0.57 are permitted to work outdoor. The expected value of assets ownership of home-based workers is 0.45, which shows that only 45 percent of women belongs to Multan Division have their ownership of assets and the standard deviation is 0.49.

In case of class of workers who work from home, the mean value for self-employed women is 0.44, for employees is 0.43 and for casual workers is 0.12 with standard deviation of 0.49, 0.49 and 0.33, respectively. The mean value for self-employed women is 0.16, for employees is 0.74 and for casual workers is 0.08 with standard deviation of 0.37, 0.43, and 0.27, respectively in case of outdoor workers. Women who work as self-employed in their own business are more likely to be home-based worker. On average, home-based workers work 36 hours per week and outdoor workers work 41 hours in a week. In case of home-based work, the mean value for getwork easily and worker satisfaction is 0.37 and 0.70 while for outdoor workers, the value is 0.33 and 0.66. Due to non-cooperative attitude of colleagues/owner in home-based work these women are doing ODW. On average home-based women workers receive income PKR 16403 and outdoor women workers received income PKR 27393. On average 0.40 homebased workers and 0.54 outdoor workers have awareness about labor laws. On average 0.36 home based workers and 0.60 outdoor workers resides in urban areas. As rural women are less educated and have non-availability of jobs, most of these homebased women are involved in embroidery, handicraft, pottery, and other activities inside the home. Married women participate more in home-based work than unmarried women as shown by the mean value 0.60 for HBWs and 0.58 for ODWs. The mean value for family setup is 0.51 for home-based worker and 0.58 for outdoor worker imply that in joint family system it is easy for the working women to share the burden of domestic responsibilities so have high tendency to contribute in labor market as outdoor worker. It is

observed that mean distance from home to district headquarter is 41.5 for HBW and 32.1 for ODW.

Table 1: Descriptive Statistics for HomeBased and Outdoor Workers

	Home Based Worker		Outdoor Worker		
Variables	Mean	Standard	Mean	Standard	
		Deviation		Deviation	
EDU	3.932	4.310	9.745	6.319	
DISE	0.426	0.495	0.225	0.418	
EDM	1.028	2.432	4.288	4.725	
EDF	3.469	4.213	8.062	5.338	
EDH	3.823	4.830	6.590	6.819	
HOH	0.194	0.396	0.159	0.366	
HHSZ	6.380	1.925	6.104	2.040	
NCH	1.853	1.762	1.566	1.657	
NDP	2.532	1.226	2.829	1.586	
DOMR	0.538	0.502	0.509	0.506	
ASST	0.457	0.498	0.488	0.500	
REDU	0.561	0.496	0.170	0.376	
OWP	0.199	0.399	0.574	0.494	
SLF	0.441	0.496	0.169	0.375	
EMP	0.429	0.495	0.748	0.434	
CAU	0.128	0.334	0.082	0.274	
HRW	36.51	7.197	40.99	6.454	
GWRK	0.378	0.485	0.330	0.470	
COPA	0.655	0.475	0.774	0.418	
WRKS	0.700	0.458	0.669	0.470	
FEI	16403.5	7348.53	27393.5	22711.9	
LBL	0.400	0.490	0.548	0.498	
AGE	37.76	10.50	36.58	9.799	
MRS	0.607	0.498	0.582	0.493	
FSP	0.515	0.529	0.585	0.493	
DIST	41.58	27.49	32.21	25.75	

Source: Calculated results are based on survey data.

5 Results and Discussion

Logit estimates of model 1 are presented in Table 2. The level of significance determined at 1 percent, 5 percent, and 10 percent, respectively. The intercept term indicates the average effect of all other omitted variables on the dependent variable. The value of Mc Fadden R^2 is 0.30 which illustrates that the explanatory variables explained 30 percent variation in women participation decision to be home based worker. Unavoidably, numerous unknown factors influence the dependent variable no matter how carefully one has selected the potential explanatory variables. Most variable except AGEII (25-34years), AGEIV (35-44 years), AGEV (45-54 years), children aged 5-15 year, domestic responsibilities, ownership of assets, marital status, family setup, and distance are statistically significant predictors for women choosing home based work.

Human capital includes education, experience, training, health, and other professional initiatives that increase the level of knowledge, skills and abilities of workers. Women level of education is an important factor that effect the participation decision of women to be home-based or outdoor worker. The coefficient of education (EDU) is negative and significant which illustrates that the probability of opting the home-based work decreases by 0.07 units with an additional year of education. Educated workers are more probably to work outdoor, because it enhances the better job opportunities for women to work in the labor market and income generating activities outside the home and also the higher opportunity cost of staying at home. This supports the findings of Edwards and Hendrey (2002), Cunningham and Gomez (2004), Kumar and Mishra (2019), Meidika et al., (2019) and Shah et al., (2019). The coefficient of presence of disease (DISE) is positive and significant at 1 percent. This implies that the prospect of women participation in home-based work increases with the presence of disease. Healthy females are more likely to work outside the home. To investigate the influence of education level among women's closed relatives (mother, father, and husband), the study concluded that mother, father and husband level of education has negatively and significantly effect the women participation decision. Participation of women in outdoor work increases with education level of their close relatives, possibly due to fewer social constraints and women's desire to provide better life to their children.

Head of household is an individual who is responsible for providing most of the family needs and who is familiar with all the activities and occupations of the household The woman as head of household (HOH) and home-based work are positively related. The probability of woman to be home based worker significantly increases by 0.53 units with each additional woman as head of household. Being head of household, home-based work is an attractive decision for women due to their added responsibility of household in meeting basic family needs, care for children and elders. The household size (HHSZ) is positively related with decision of women to participate in home based work and the result is statistically significant. In large family size, there are more mouths to be fed so

women participate more in economic activity to support the family economically. Moreover, large family size involves greater household responsibilities, and women have less time to work outdoor so work from home is suitable to take up. The negative and significant coefficient of number of dependents (NDP) has been found. One additional dependent in household decreases the likelihood of women to be home-based worker by 0.24 units. Women who live in households with a large number of dependents, face greater economic pressure which compels them to work outdoor.

The participation of married females is influenced by number of children. Two dummies for number of children are incorporated in model i.e. CHAI and CHAII while the third is taken as base category (CHAIII). The positive and significant coefficient of CHAI implies that the probability to work from home is significantly more when small children are there at home. This may be due to their added responsibility of household maintenance and care for children. The similar findings are presented by Edward and Hendrey (2002), Cunningham and Gomez (2004), Chalmers (2008) and Meidika et al., (2019). While the coefficient of CHAII is insignificant implies that women with children aged 5-15 years do not significantly affect her participation decision as home based or outdoor worker, since children of this age bracket are likely to survive at their own in a casual absence of woman.

Domestic responsibility influences the women's decision to work inside or outside the home. In the present study the coefficient of domestic responsibly (DOMR) is insignificant, indicate that it is less important in influencing the decision of women to work from home or outdoor. The results also support the qualitative findings of Cunningham and Gomez (2004) and Hassan and Farooq (2015). Ownership of assets has a positive but insignificant influence on women participation decision as home based worker. The insignificant result implies that women's ownership of assets do no effect their participation decision. Ownership of assets include ownership of house, land, livestock etc. increase household wealth and financial stability thus make it less likely for women to seek employment outside the home.

To examine the impact of social constraints on women participation decision, two variables are included in the model. First is restrictions to achieve education (REDU) and the other is outside work permission (OWP). The regression coefficient of REDU is positive and has a significant impact, implies that the restrictions to achieve education positively affect the women participation as home based worker. The negative and significant coefficient of OWP implies that women who have given permission to work outdoor are less likely to work from home. The highly significant results shown that outside work permission increases women mobility because they can easily go to cities for work and earn high wages. Awan, Faridi and Abbas (2015) put forward similar results.

Age of women in various age groups is taken in model 1 (Table 2) to examine their impact on women's participation decision. The coefficient of AGEIII (35–44 years) is positive and significant, imply that the probability of opting the home-based work increases by 0.67 units with each additional woman in the age groups AGEIII as compared to AGEI (15-24 years). While the coefficients of AGEII (24-34 years), AGEIV (45-54 years), and AGEV (55-64 years) are insignificant. The magnitude of opting the home based work is highest for AGEIII (35–44 years) because of greater domestic and child care responsibilities and women have small children and have less time to work outdoor so women have to stay at home. Cunningham and Gomez (2004), Meidika et al., (2019), and Kumar and Mishra (2019) present similar results.

The positive coefficient of marital status (MRS) implies that the probability of married women to be home-based worker is more as compared to unmarried women might be due to domestic responsibilities and presence of small children. Another important reason to work from home is the flexibility and balancing life-work (Wynarczyk & Graham, 2013). Cunningham and Gomez (2004) and Kumar and Mishra (2019) also corroborate these comparable results. The coefficient of family setup is negative but insignificant. The likelihood of women who belongs to joint family system is less likely to be home based worker in comparison to those who belongs to nuclear family system. The economic reason could be that in joint family system it becomes possible to share the burden of domestic work and child care responsibilities and women have more time to work outdoor. The coefficient of DIST is positive and has insignificant impact, imply that higher the distance from home to district headquarter more is the possibility of women to engage in home based work. As it is difficult for women to travel long

hours to reach at work place so they prefer to work at home.

Dependent Variable: Women Participation Decision (PDW)								
Explanatory	Description of variables	Model 1	Model 2					
Variables	Constant		-0.245	-0.826				
		(-0.679)	(-1.271)					
Human Capital	Education in completed years	EDU	-0.079*	-0.096*				
Variables			(-4.655)	(-5.492)				
	Presence of disease	DISE	0.423*	0.408*				
			(2.643)	(2.489)				
Presence of Closed	Mother's years of education	EDM	-0.089*	-				
Relatives Education			(-3.398)					
	Father's years of education	EDF	-0.061*	-				
			(-3.201)					
	Husband's years of education	EDH	-0.060*	-				
			(-3.201)					
Family Characteristics	Head of Household	HOH	0.538*	0.430***				
			(2.582)	(2.055)				
	Household Size	HHSZ	0.179*	0.077**				
			(3.963)	(1.691)				
	Number of dependents	NDP	-0.245*	-0.094				
			(-3.838)	(-1.390)				
	Children under age 5 years	CHAI	0.462*	0.449*				
		\sim	(3.648)	(3.486)				
	Children in age 5-15 years	CHAII	-0.127	-0.072				
	International Journ	al of Contemporary	(-1.634)	(-0.947)				
	Domestic responsibility	DOMR	0.227	0.277**				
			(1.561)	(1.841)				
	Ownership of assets	ASST	0.207	0.066				
	_		(1.383)	(0.426)				
Social Constraints	Restriction to achieve education	REDU	0.665*	0.758*				
			(3.720)	(-4.074)				
	Outside work permission	OWP	-0.655*	-0.666*				
	-		(-3.651)	(-3.631)				
Work Characteristics	Class of Worker							
	Self-employed	SLF	-	0.985*				
				(3.923)				
	Employee	EMP	-	-0.556*				
	(Casual work base category)			(-2.385)				
	Hours of work (under 35 hours)	HDWI		1 1/1*				
	Hours of work (under 55 hours)		-	(4.523)				
	Hours of work (35-48 hours)	HRWII	-	-0.698*				
	(Work $>$ 48 hours base category)			(-3.268)				
	Get work regularly and easily	GWRK	-	0.275***				
				(1.758)				
	Cooperative attitude of colleagues/owner	COPA	-	-0.501**				
	Worker satisfaction	WRKC		(-3.002)				
	worker saustaction	WINKS	-	(1.663)				
Labor Laws	Labor Laws	LBL	-	-0.157				
				(-0.985)				
		1						

Table 2: Logit Estimates for Women participation in Home Based and Outdoor Work

Demographic Variables	Age in completed years	AGE	-	0.024 (0.936)
	Age-squared	AGE2	-	0.00004 (0.140)
	15–24 years	AGEII	0.190 (0.799)	-
	25–34 years	AGEIII	0.672* (2.707)	-
	35–44 years	AGEIV	0.465 (1.637)	-
	45–54 years (15-24 years base category)	AGEV	0.155 (0.438)	-
	Location (Urban area)	LCN	-	-0.250 (-1.510)
	Marital Status (married)	MRS	0.282 (1.377)	-
	Family setup (Joint family)	FSP	-0.054 (-0.356)	-
	Distance in kilometers	DIST	0.003 (1.308)	-
	Sample Size Mc Fadden R-squared LR Statistic (21df) P-value (LR Stat)		1227 0.30 519.80 0.000	1227 0.33 561.075 0.000

Source: Author's Calculations by Using E-Views (Statistical Software).

Note: z-statistics are given in parentheses; the statistically significant at 1%, 5%, and 10% level are indicated by *, ** and *** respectively.

Model 2 (Table 2) comprises age of women in completed years in place of various age categories; human capital and family related variables are the same as in model 1 (Table 2). However, work related variables are included in model 2 to examine their impact on women's participation decision to be home-based or outdoor worker. Work related variables are class of worker, working hours per week, get-work, cooperative attitude, and worker satisfaction. Labour laws and location are also included as explanatory variables. The value of Mc Fadden R^2 is 0.33, indicates that there is 33 percent variation in women's participation decision to be home-based worker which is explained by explanatory variables.

The negative coefficient of education and positive coefficient of presence of disease are found similar as in model 1. Both are statistically significant. The findings of family characteristics are also same as found in model 1; female as head of household, household size, number of dependents, number of children, domestic responsibilities, and restrictions to achieve education, outside work permission, and ownership of assets. The coefficient of domestic responsibility (DOMR) is positive and significant in model 2, indicates that women workers feel comfortable to work at home with greater domestic chores, child care responsibilities and mainly they cannot allowed to work outdoor. But the coefficient number of dependent (NDP) is insignificant.

To examine the impact of class of worker on women participation decision three dummies are included i.e., self-employed, employee, and casual worker. The positive coefficient of self-employed (SLF) indicates that self-employed women are more likely to work from home. The probability of women participation in home based work significantly increases by 0.98 unit with each additional women worked as self-employed as compared to causal worker. The self-employment status is possible for home based work because due to less education and lack of acquired skills they hardly work outdoor. While the negative and

significant coefficient of employee (EMP) implies that women worked as employee are more likely to work outdoor. The probability of opting the home based work significantly decreases by 0.55 units if one more woman worked as employee.

The participation decision of women is also influenced by working hours. The coefficient of HRWI (under 35 hours per week) is positive and highly significant imply that women who work less than 35 hours in a week are more likely to work at home as compared to women who work excessive hours (49+ hours per week). On contrary the coefficient of HRWII (35-48 hours per week) is negative and significant shows that women who work more than 35-48 hours weekly are less likely to work from home. Outdoor work required longer working hours so women with greater household responsibilities choose to work at home with fewer hours. Findings go in collaboration with Meidika et al. (2019).

Cooperative attitude (COPA) plays vital role in determining the participation decision of women. The negative and significant coefficient of cooperative attitude indicates that the probability of opting the home-based work decreases with an increase in cooperative attitude of colleagues/owner. Home-based workers deal with some noncooperative attitude of colleagues/owners as most of the workers are sub-contracted and get work from middleman. The middleman often exploits woman home-based workers by providing the raw material which is of low quality and pays low wages due to which they choose outdoor work. The coefficient of get work (GWRK) is positive and significant at 5 percent level. The probability of women to be a home-based worker increases with each additional woman who get work easily. Home-based women workers easily get-work either as middleman or as self-employed. They are less likely to work outdoor. Worker satisfaction (WRKS) positively influences the participation decision of women workers. Homebased workers are more satisfied from their work than outdoor workers in Pakistan (Asghar, Danish, & Rehman, 2017; Shah et al., 2019).

Awareness of labor laws (LBL) and women decision to choose home-based work are negatively and insignificantly related. Women workers who have awareness about labor laws are more likely to work outside the home and get higher earnings, because it acts as a tool to promote empowerment of worker and protect the worker's right.

Inverse relationship between age and homebased work was expected based on Mincer (1958) proposition. It means that higher age denotes movement away from home-based work, based on Mincer (1958) proposition that age denotes experience and higher age means higher degree of experience. Therefore, а labor with high age/experience would always move to outdoor as the latter denotes the higher level of earnings. The present study found that the coefficient of age and age-squared is positive and insignificant; indicates that women's age is positively correlated to women's decision to engaged in home-based work. The reason may be the domestic and child care responsibilities, social constraints, lack of acquired skills, and limited mobility which persuade them to stay at home. This supports the findings of Kumar and Mishra (2019). The regression coefficient of location (LCN) implies that the probability of women who belongs to urban area less likely to work from home as compared to rural women. But the coefficient is insignificant. Women resides in rural area are mostly uneducated and face social constraints which forced them to work from home. In this regard, Edward and Hendrey (2002) and Meidika et al., (2019) found similar results.

Conclusions and Policy Implications

The present study analyzed the influence of numerous socio-economic factors on participation decision of women (PDW) as home based or outdoor worker. For the analysis, this study is conducted as confined to the women who are living in Multan Division, a division of the South Punjab (Pakistan), which is based on mixed rural and urban blend. The empirical results suggested that there are numerous factors that explain the participation decision of women in the Multan division.

The empirical results suggest that women's age is one of the important factors influencing the decision of women regarding participation in the economic activities (home-based or outdoor work). It has been observed that the possibility of choosing the home based work increases with an increase in age. Home-based work is taken up due to low human capital along with domestic and child care responsibilities. Therefore, the study found negative and significant coefficient of education which imply that the likelihood of women to work from home decreases with an additional year of education. The coefficient of presence of disease, head of household,

family size, married women with children under age 5 years, restrictions to achieve education, selfemployed, get work easily, worker satisfaction, location, and marital status are significantly and positively related with women participation in home based work. While number of dependents (NDP), married women with children aged 5-15 years, outside work permission, employees, cooperative attitude, and family setup are less probable to work at home. The study also conclude that women who work less than 35 hours in a week tend to be home based worker while women who work more than 35-48 hours weekly are less likely to work from home in comparison to women who work excessive hours (49+ hours per week). The coefficient of ownership of assets is positive and the coefficient of awareness about labor laws is negative both are insignificant.

The study concluded that home-based work gives the woman flexibility regarding work and their domestic duties; this can be an alternative to enter the labor market. The finding show that home based workers have low human capital so it is important for policy makers to provide decent work to these home based workers. So, Human capital should be on top priority by allotting extra resources for education, health and vocational trainings to improve the decent work opportunities. The free technical and vocational education must be on top priority as home based worker has a very high need for technical and vocational labor force. There is a dire need of legislation and implementation on laws made for working women both home-based and outdoor to facilitate them for decent working hours with fixed wages.

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