

## Estimating the Determinants of Female Labor Force Participation in Pakistan

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### Abstract

The study estimates the factors affecting female labor force participation (FLFP) in Pakistan. For this purpose, the study uses Pakistan Social and Living Standard Measurement Survey data for the year 2013-14 and employs the logit model because of the binary nature of the dependent variable. The results reveal that FLFP has a positive relationship with the age of the female. Whereas it has u-shaped relation with the education of the women. Females living in a household whose heads are professional; skilled agriculture, forestry, and fishery; elementary occupations like laborer, hawkers, and masons have more chance to enter the labor market as compared to females whose household heads are managers or executives. There is a negative relationship between FLFP and household size. Poverty and female proportion are pull-factors, whereas wages are pull-factor. Further, the impacts of foreign remittances on FLFP are favorable.

**KEYWORDS:** Female labor force participation, education, age, occupation, household size, poverty, female proportion, foreign remittances, and wages.

### INTRODUCTION

There is a major role of female labor force participation (henceforth FLFP) in economic growth. Women's proportion is more than half of the population of any country. But their percentage in the labor force is much less as compared to men both quantitatively and qualitatively in most countries (Lawanson, 2008). Women can play a massive role in increasing the labor force along with men. So, FLFP is necessary for the economic growth of any country. The development of any country can be even more outstanding if a greater number of women contribute to the workforce. According to World Bank (2015), it is difficult to have access to an inclusive and sustainable level of growth of any country when half of the population is not fully participating in the economy. If the FLFP is low in any country, then it implies that the resources of the country are not fully utilized. Enhancing the entry of females into the labor force is the solution to many economic miseries. Such a step will surely turn down the pressure faced by the dependency ratio and is leading to an increase in economic growth. FLFP in the labor market should therefore be encouraged (Gauci and Tiziana, 2012). If the number of females increases in the labor market, it will cause to enhance the number of taxpayers, thereby ensuring the sustainability of the welfare of the state (Andersen *et al.*, 2009).

FLFP has been being discussed intensively in many countries around the world for three decades. As a result, there is a remarkable increase in FLFP in both developed and developing countries (Altuzarra *et al.*, 2019). In the developed countries FLFP is the basic achievement of economic development and it plays a massive role in the economic growth of developed countries (Stuart *et al.*, 2018). According to Ortiz-Ospina & Tzvetkova (2017), the FLFP rate in

developed countries has increased from 4 percent to 70 percent from 1900 to 2000. And it was noted above 70% during the year from 2008 to 2015. The FLFP rate in some developed countries is noted as 72 % in Ice Land, 60% in Australia, 57% in Estonia, 57% in United State, and 58% in Denmark.

The percentage of SAARC countries' female labor force participation is given below. For instance, Bhutan having 40.1%, In Sri Lanka 34.5 %, Bangladesh 29.1%, Maldives 27%, India 24.5%, Pakistan 22.4%, and Afghanistan have a 17.3% rate of FLP. These comparisons were taken into account with the help of the online database of the worldbank (for example <https://data.worldbank.org/indicator/SL.TLF.TOTL.FE.ZS>). Among SAARC countries, Pakistan is the second last country where the FLFP is low (World Bank, 2017).

Even concerning Pakistan neighboring Muslim countries like Iran, Turkey, Oman, and Qatar, there is low FLFP in Pakistan (see e.g., an online database of the World Bank). Some studies [Amtul and Ahtaz (2002), Naqvi and Shahnaz (2002), Anwar (2009), Yaseen et al (2011), Afzal (2012)] reveal factors that determine female's contribution to the labor force like (family size, household income marital status, springs, education, residential status, and spouse earning). There are some other important variables to affect FLFP, but they are missing, especially in Pakistan. One important variable is a wage that is missing in other studies. This study thinks that it is a pull factor. If wages are higher, then there are more chances for females to take participate in the labor force. The other important variable is the female proportion to affect the FLFP. This study thinks that it is a push factor. If there are more females in a household, there are more chances of increasing the number of dependents. Such households are unable to meet their expenditures. Then females are bound to take part in the female labor force. Furthermore, poverty is also another factor to affect FLFP and it is considered a push factor. If a household is poor, then females in these households have more chances to work. Further, Foreign remittances also play an important variable in FLFP. Females of households who are receiving foreign remittances have more chances to work. The households receiving foreign remittances spend more on educating their all children, including the females as compared to households not receiving. Therefore, there are more chances for females of these households to participate in FLFP due to their higher education. Furthermore, there is little evidence to estimate the determinants of the Female Labor Force by using PSLM data for the years 2013-2014, Pakistan.

The structure of the paper is as follows: After the introduction, the second section deals with the literature review. The third section discusses the data and methodology employed. The fourth section explains the results, while the last section concludes the paper.

## LITERATURE REVIEW

Female labor force participation has a vital role in the economic growth of any country. In context to this relation, many researchers found the factors that can affect the female's labor force participation. Some factors encourage women to participate in the labor market while some factors decline their participation. Here are some studies that tried to find the factors, affecting female labor force participation. The literature review is broken up into international and national levels.

### International Studies

A research study was made by Assad (2002) to find the impact of marriage and fertility on FLFP in Morocco. The study showed that marriage and the presence of children had an insignificant impact on private wage work as compared to the Government sector. And opposite to this education of women as well as her father's education is positively related to women work participation.

An empirical analysis based on the 1998 nationally representative household survey was held by El-Hamidi (2003) to find the connection between poverty and female labor supply in Egypt. The analysis depicted reversed S shape labor supply curve, which showed that at the low level of income women are forced to participate in the labor force to meet the family needs. Meanwhile, when meeting a better condition, they move back to their household activities. The OLS estimates concluded that poverty had a significant positive impact on women's labor supply.

Francine and Lawrence (2006) shed light on the labor supply behavior of females in 2006 in the USA. While data used for the study was taken from the March Current Population Survey (CPS) of the years 1980 to 2000. The data was cross-sectional. These estimations advocated that female's real wages gone up in the 1980s and were comparatively less in the 1990s and there was found an equivalent increase in labor supply in all decade. Also, married men's real wages knockdown somewhat in the 1980s but gone up in the 1990s, which caused a slight hold back in the growth of the female labor force in the 1990s as compared to the 1980s. While in 1980 to 2000 period, overall women wage elasticity was condensed. Women's labor supply behavior was found positive with the increase in their wages.

Research conducted by Bloom, et al (2007) used a panel of 97 countries from 1960 to 2000 for analysis. The study inspected the effect of fertility on FLFP during their fertile years and concluded that if fertility declined it caused the increase in the ratio of the female labor force to the total population and increased income per capita. Female labor force data was taken from International Labour Organization while fertility rate was taken from World Development Indicators. The study also inspected the relationship of education with fertility by using the IV approach.

Tavares et al (2008) concluded that the relative price of home appliances has a significant positive effect on women's labor supply in the countries of OECD (including all the largest European economies and the United States). The data was taken from World Bank (2001) between the years of 1975 to 1999 on 311 observations except for the price index of home appliances that had been taken from the New Chronos Database at the Statistical Office of the European. An instrumental variable approach was used to assess the causality between lower prices of home appliances and female labor force participation but the results showed no causality. The study was based on microeconomic literature.

A study was conducted for each state and union territory of India by Ahmed and Masood (2009), separately in rural and urban areas. The study tried to inspect the factors responsible for the inter-state variations in female work participation by using the National Sample Survey Organization (NSSO) 61st round (2004-05) data. The data was cross-sectional and two separate regressions were used for estimation. The regression results showed that children of age 0-4 have a negative effect, while education, wages, and the Muslim population have no significant effect on rural areas female work participation. In urban case household characteristics, variables, and personal variables were positively related to women work participation. While found opposite results for Scheduled tribe and scheduled caste population.

Mano and Yamamura (2010) estimated the impact of a husband's education and family structure on married women's work participation in Japan. This study used Japanese General Social Survey (JGSS) data, which used a two-step stratified sampling method. These surveys were conducted throughout Japan between 2000 and 2002. The study results provided evidence that a husband's education reduced the labor supply of women but significantly help to improve productivity conditional with work participation. Moreover, mother and mother-in-law help in work participation while father and father-in-law have no effects in this regard.

Fink (2011) addressed in his study that female time allocation is generally affected by being a mother of the younger child and in particular the amount of time spent on rewarded activities. The data source was the Time-use and Health study, which was directly built on the sample of

1254 women interviewed for the Women's Health Study of Accra. OLS method was applied for estimation. The study estimated that the women having young children in the household have fewer chances to take part in the labor market as compared to the women not having a young child.

Zandi et al (2012) tried to highlight the involvement of women-headed households in Iran's economy which was based on an evaluation of their role in economic activities. The data was obtained from the Household Income and Expenditure Survey in urban areas of Iran. The logistic model was used for estimation. The study estimations showed that academic education significantly impacted the women-headed households to be employed. The study results also showed that married women have more possibility to be employed as compared to unmarried.

Sumuleand Syafitri (2013) analyzed the factors that affect married women's participation in the labor force in the informal sector in Ketawanggede, a sub-district of Malang. The data was collected from 50 respondents (married women) aged 16-60. The linear Probability model and Logit Model were used for estimation. The study found that the number of dependents, migration status, total working hours/day, husband's employment status, number of offspring, family size, and income of husband significantly support married women to participate in the informal sector, while age and education opposed to it.

Chukwudi et al (2015) collected primary data for both rural and urban sectors of Nigeria through a household survey 2010/2011. The study discovered completely different determinants of the women labor force in rural and urban sectors through employing logistic regression as data was binary. The findings of the study showed that marital status, per capita income, poverty rate, and religion have a positive association with FLFP in the rural sector, while in the urban sector age and literacy rate are the significant determinants of FLFP.

Varol, F. (2017) conducted a study in Turkey and examined the major determinants of female labor force participation. The study used World Values Survey data for the year 2007. The binary logit model is used for estimation. The study concluded that higher education, a higher level of income, and being the chief wage earner in the household had a positive impact on the FLFP in Turkey. Whereas age positively affects, up to 30 and its effect negatively after the age of 30. Further marital status and increase in the number of children also hurt female labor force participation.

Tanankem et al, (2018) estimated the effect of information and communication technology on female labor force participation. The study included 48 African countries for the period 1990-2014 for estimation. The study used Ordinary Least Squares, Fixed Effects, and the Generalized Method of Moments regressions. The findings of the study indicated that improving communication technology had a positive significant effect on FLFP with the following reliable order of increasing magnitude: mobile phone access; internet access and fixed broadband subscriptions. The study estimations showed that the availability of high-speed internet and fixed wireless broadband access to the Internet were imperative for female work participation in SSA countries.

### **Research Work in Pakistan**

To find the trend of female work in economic activities a study was held by Naqvi and Shahnaz (2002). The data on which study was conducted was cross-sectional taken from the Pakistan Integrated Household Survey (1998-99), on the sample of the female having age between 15 to 49 years. The binomial Logit model and the Multinomial model were used for estimation. Results of estimation indicated that single and divorced women have 5.2 percent more possibility to participate in economic activity as compared to married. Educated females are also more likely to contribute to economic activity.

Amtul and Ahtzaz (2002) explored some factors, causing the educated married women to take part in the labor market. The study findings showed that the women's education levels

influenced positively the female labor force participation decision. The data were collected from different areas of the district, Mandi Bahauddin through a field survey. The Logit and Probit models were used due to the binary nature of the data. The study also found that Economic factors push women to contribute to economic activities to fulfill the basic needs of their families. Some social and demographic factors like small family size, household income, landowning, and springs negatively affected female labor force participation.

Touseef et al, (2002) conducted a study in the area of Multan, and data was collected through a field survey from entrepreneurs and the middle man in the cottage industry in Pakistan. Most of the women were involved in clothes embroidery. This cottage industry is not famous but has an adequate portion in the business of Multan. The mainstream workers said that they started it as a hobby but due to weak economic conditions they tried to increase their income to fulfill the needs of their families. THE simple OLS method was used for an estimation which shows a direct positive relation between hours of female workers and poverty.

Adiqa (2009) conducted a study in Pakistan using Labour force survey data and Household Integrated Economic Survey (HIES). OLS and Tobit's models were used for estimation. The study concluded that education and household expenditure have a positive but insignificant effect on FLFP, while household income and household head have negative effects on female labor force participation.

Anwar (2009) analyzed different factors in the study, which affect the female labor force participation in Bahawalpur Pakistan. The study concluded that higher education increased the rate of female labor force participation by using the logistic method. The study found that the number of children, marital status, residential status, and spouse earning had a contrary effect on FLFP.

Masood et al (2011) used Multiple Indicator Cluster Survey data of Punjab from the period of 2007 to 2008 to analyze the factors that determine FLFP. Education of the respondent used as direct human capital. Logit model was used for estimation, while Heckman's (1979) two steps procedure was used to remove the selectivity bias problem. The estimation results showed that age square, household head education, and lower levels of respondent's education were negatively related to FLFP. Factors that encouraged FLFP were higher levels of education, residence in an urban area, and large family size. Moreover, the study depicted that women as employees, employers, and self-employed earn more as compare to the agricultural sector.

A study was conducted by Mehak (2011) on the data based on a PSLM cross-sectional micro-dataset for 2006/07, which was collected by the Federal Bureau of Statistics through the survey. The study intended to explore the determinants of FLFP across rural and urban Pakistan. The instrumental variable (IV) approach was employed to gear the issue of endogeneity in the data, while for estimation of variables Probit model was used. The study showed an inverse U-shaped relationship between age and FLFP. Married women have fewer chances to participate in the labor market compared to single females because married women were inhibited by household duties. Living in a joint family improved the prospect of women involving in economic activities. Ownership of fixed assets had a negative significant impact on female participation in the labor market.

Sajid et al (2011) analyzed some factors of married women's work participation in District Gujrat, Pakistan. The data was obtained randomly from three Tehsils of the District from rural and urban areas from 301 respondents. Multilayer Perception Neural Network Model was used for analysis purposes. The analysis pointed out the major factors like literacy status, area of residence (rural, urban), family system, family size, and a husband who affect and on which basis can be predicted the FLFP.

Ghafoor (2015) analyzed that women are empowered due to their access to media, having their bank account, doing any job, opportunities for an outing, while the joint family system and fear of violence from father/husband harmed it. The study was held in D.G. Khan by collecting

primary data through a field survey. 200 women were selected as sample size. Most women were working on a need basis. OLS method of estimation was used while T-test, F-test, R square, and adjusted R square were used for significance.

Shaheen *et al* (2015) conducted a field survey on 402 women (aging 15-65) by using binomial and multinomial Logistic models for analysis. The main purpose of the research work was to analyze the factors which determined female employment status in Sahiwal, Pakistan. The study concluded that age, educational attainment, marital status, and presence of children above 10 years have a significant positive impact on female employment. In contrast household size, children below 10, husband's education affected negatively.

Zaheer and Qaisar (2016) analyzed some macro-level factors that affect FLFP in Pakistan at the country level. World development indicator was a data source for the years from 2004 to 2013. The Ordinary Least Square technique was used for estimation. The results of the study indicated that the mortality rate and the unemployment rate had a negative and significant effect on the FLFP rate, while fertility rate and GDP growth rate impacted negatively to the FLFP rate but this relationship was insignificant.

Hussain *et al.* (2016) arranged micro-level data from a labor force survey conducted by the Federal Bureau of Statistics in 2008-2009. Federal Bureau of Statistics (FBS) collected some important data of about 36,400 households from four provinces of Pakistan. A binary logit model was used to test the hypothesis due to the binary nature of data. The dependent variable was FLFP while independent variables were several factors that determine FLFP. The results of the study showed that the level of education, training, age, location, residential period, and being male has a positive and significant impact on FLFP.

Momal (2016) conducted a field survey in the area of Bahawalpur and highlighted some factors which directly affected the working capacity of married working women. The logistic technique was used for this purpose. The study concluded that traveling time decreased the working hours of married school teachers. The factors which also stopped an educated woman to work are her husband, in-laws, and a large number of children. However, poverty, higher education, and working experience encouraged women to work more.

Qadir and Afzal (2019) estimated the impact of some cultural factors on the earnings of working women in KPK a province of Pakistan. Primary data was collected from 789 respondents through a comprehensive questionnaire from 10 districts randomly selected from Khyber Pakhtunkhwa province in the year 2017. OLS regression was used for variable estimation. The regression analyses showed that with the increase in women an educational year and each additional year of experience increased earning of working women also. Family size negatively and significantly affected working women's earnings. While marital status and bearing own child had negative but insignificant on working female earning. Overall findings of the study depicted that cultural factors have an important effect on working women of KPK.

Maqbool *et al.* (2019) conducted a study in Sargodha a district of Pakistan and found the impact of some internal and external factors on female labor force participation. The personal interview technique was used to collect data from three tehsils of district Sargodha (Bhalwal, Kot Momin, and Sargodha) through a well-defined and pretested questionnaire. Data were obtained from 450 married and single women. The binary Logit model was used to find the impact of factors on FLFP. The study results showed that the education of the household had a positive effect on FLFP. In the private sector family, background and nepotism had a positive and significant effect on FLFP, because family firms appointed their family members on a reference base. Cronyism also showed a positive significant effect on FLFP.

## DATA AND METHODOLOGY

### Data Source

This study used PSLM (Pakistan Social and Living Standards Measurement) data for the year 2013-2014. This is cross-sectional microdata collected by the Pakistan Bureau of Statistics Pakistan. The survey was conducted on income and consumption data based on the individual household level. The survey overall covered 43497 observations.

### Methodology

#### Variable Description

The study consists of some pull and push factors which are used as explanatory variables for FLFP.

All dependent and independent variables are explained in the below table.

Here we have to put the variable description

<b>Table: 1 Description of a dependent variable</b>	
FLFP	Female labor force participation If a female participates in the labor force = 1 Otherwise = 0
<b>Set of Explanatory Variables</b>	
Age Age <sup>2</sup>	Age of the women respondent between 15-50 years
Education Education <sup>2</sup>	Female's education level (year of schooling)
Hhprof	Household head occupation (profession) of the respondent It will be a categorical variable (by different occupations). prof1-managers prof2-professionals prof3-technicians and associate professionals prof4-clerical support workers prof5-service and sale workers prof6-skilled agriculture, forestry, and fishery prof7-crafts and related trades workers prof8-plant and machine operators prof9-elementary occupations Where we take 1 <sup>st</sup> category as our base category.
Ldown	Land owing is a dummy variable If a female own land =1 Otherwise = 0
Hhsize	Household size
F-remit	Foreign remittance received by a household
FHH	Female-headed household a dummy variable If a female is head of household =1 Otherwise =0
Poverty	Poverty is a push factor that pushes a woman to participate in the labor force
Ur	Ur= 1 if the region is urban, otherwise 0

The functional form of the model is as;

$$FLFP = \beta_0 + \beta_1 AGE + \beta_2 AGE^2 + \beta_3 EDU + \beta_4 EDU^2 + \beta_5 HHProf + \beta_6 LOwn + \beta_7 FEPro + \beta_8 HHS + \beta_9 FR + \beta_{10} FHH + \beta_{11} P + \beta_{12} W + \beta_{13} PROV + \beta_{14} Ur + \varepsilon$$

Where

FLFP	=	Female labor force participation
AGE	=	Female's age
EDU	=	Female's education up to matric.
HHprof	=	Household head profession
Lown	=	Ownership of land by a female.
FEPro	=	Female Proportion in Household
HHS	=	Household size
FR	=	Foreign remittances received by a household.
FHH	=	Female headed household.
P	=	Poverty
W	=	Wages
PROV	=	Provinces
Ur	=	Urban Area

## RESULT AND DISCUSSION

Female labor force participation is essential for the economic growth of any country. The development of any country can be even more outstanding if a greater number of women contribute to the workforce. For the achievement of inclusive and sustainable growth, half of the female population must also take part in the labor force. The low FLFP implies that there are unutilized/underutilized resources of the economy. Increasing FLFP may be the solution to many economic miseries. This study thinks it necessary to find the factors affecting FLFP in Pakistan. The results are presented in Table 2.

Age is a basic factor that affects FLFP, as women's age increases it improves their experience and skill of market to work. So, they become more productive and earn more wages than earlier. So, their possibility to contribute to the labor market amplifies. Age and age square have a positive sign but the coefficient of the latter is not statistically significant. Our outcomes are consistent with those of Hussain et al. (2016). However, our results for age square are contrary to the study Mehak, (2011) that explained as when age increases a certain level of 42 years and above this relation with the labor force become negative.

Education is a basic factor that affects directly FLFP. This is measured by completed years of schooling and education square. The coefficient of education is showing a negative sign implying that women who are under matric or matric are less likely to participate or they do not have opportunities in the labor force market. While the positive sign of the square of education implies that the education has reached a certain level of intermediate and above, the possibility of females taking part in the labor force increases. These results are also consistent with those of Mehak (2011) and Assaad (2002). Women having higher academic education will have more chances to find jobs than men Avazalipour et al, (2012).

In our study, we also estimate the effects of household head occupation on female labor force participation. Occupation is a main earning source that determines earning level of the households. We seize different categories of household head's occupations. Managerial post (Executive post) is nominated as base category and estimates the impact of some other occupations with the effect of this. A female whose household is professional is 1.26 percent more active to take part in the labor force instead of females whose household heads are managers or executives. households whose heads are technicians or having associate professions,

their females are .38 percent fewer chances to take part in the labor force. As skilled agriculture, forestry and fishery are less earning occupation so their females are 1.88 percent more likely to involve in the informal sector or agricultural sector with their men. Similarly, a household with elementary occupations like laborers, hawkers, and masons have very limited earnings so their women also start work at an early stage to fulfill their basic needs. therefore, their log of odd ratio to participate in the labor force is 1.07 percent.

**Table 2.Determinants of Female Labour Force Participation in Pakistan**

<b>VARIABLES</b>	<b>Coefficient</b>	<b>z value</b>	<b>P&gt; z </b>
<b>Age</b>	0.0307	130.60	0.0000
<b>age2</b>	0.00001	5.72	0.0000
<b>Educ</b>	-0.19	-144.71	0.0000
<b>educ2</b>	1.01	107.65	0.0000
<b>prof2</b>	1.26	109.45	0.0000
<b>prof3</b>	- 0.38	-19.28	0.0000
<b>Prof4</b>	0.57	33.29	0.0000
<b>prof5</b>	1.04	106.33	0.0000
<b>prof6</b>	1.88	277.94	0.0000
<b>prof7</b>	0.55	45.14	0.0000
<b>prof8</b>	0.01	0.93	0.0000
<b>prof9</b>	1.078	114.04	0.0000
<b>Landown</b>	- 0.004	- 22.08	0.0000
<b>Femprop</b>	0.97	54.02	0.0000
<b>Hhsize</b>	- 0.15	-2.67	0.0000
<b>Fremit</b>	1.31	125.34	0.0000
<b>Poverty</b>	0.703	56.99	0.0000
<b>Wages</b>	0.39	299.95	0.0000
<b>Punj</b>	2.19	136.30	0.0000
<b>Sindh</b>	1.77	103.04	0.0000
<b>KPK</b>	1.86	110.61	0.0000
<b>Urban</b>	0.41	53.72	0.0000
<b>_cons</b>	- 4.49	-127.16	0.0000

Number of observations= 2617357

Logistic Regression Chi-Square (23) = 1041337.79

Probability value = 0.0000

Pseudo R-Square= 0.4333

Log-Likelihood = -680955.33

Land owning is the main factor that negatively influences FLFP explaining if females whose households are having their land, do not take much interest in market work. Because land is itself an earning source. Therefore, our study results also show negative and significant relation with landowning.

The high female proportion in a family is a factor that pushes women to take part in the labor force. Our results also show a positive relationship between high female proportion and FLFP. It can be explained as in a family if the number of females is more than men their possibility to take part in the workforce increases by 0.97 percent. Because they are being forced to work to fulfill the necessary needs of a family due to less proportion of male earners.

One of the household characteristics is household size. The coefficient of household size is showing a negative sign that depicts if the household size increases above 15 members, the

possibility of females participating in labor decreases. As our coefficient shows a negative sign it means one unit change in household size happens, the possibility of women's participation in the labor market decreases. It is inferred that with low income of large family size, women are forced to participate in the labor force. But if the household size increases up to a certain level, then females are more aggressive to engage in household activities like food preparing, washing clothes, and take care of other family members Mehak (2011). Our results are also consistent with those of Masood, et al. (2011).

The coefficient of Female-headed households is positive and significant which depicts that females belonging to female-headed households have more chances to participate in the labor force. These results are consistent with those of Mehak, (2011).

poverty is the main determinant that pushes a woman to take part in the labor force to meet the basic needs of her family as well. The positive sign of the coefficient of poverty shows that women belonging to a poor family are more interested to participate in the labor force. Our results for poverty are also consistent with those of Chukwudi, et al (2015) and Ashraf Momal (2016). It elaborates if the poverty rate is higher in a family then the likelihood of a woman would increase to participate in paid jobs.

In our study, we also estimate the effects of foreign remittances on women's decision to become part of the labor market that is not yet discussed in any previous study. Our coefficient for foreign remittances is positive that can be justified as if a household receives foreign remittances it has more possibility for their females to get higher and technical education and also can get good health care facilities. As a result, females will be able more to participate in market work with high wages.

Wage is another pull factor of FLFP. Our results show a positive and significant relationship of wages with FLFP. It is justified as if females are offered high wages, they will prefer to work instead of spending leisure time at home. Our results show that one unit change in wages will increase FLFP by 0.3989. Our results are consistent with those of Ahmed and Masood (2009).

We also estimate factors affecting FLFP in the four provinces of Pakistan. We take Baluchistan as the base category. As a comparison of provinces, females living in Punjab, Sindh, and KPK are more likely to participate in the labor force as compared to females living in Baluchistan. The analysis at the regional level reveals that the females living in urban areas are more likely to participate in the labor force as compared to females living in the rural areas.

## CONCLUSION AND POLICY IMPLICATIONS

The study finds different factors to affect FLFP using Pakistan Social and Living Standard Measurement Survey in Pakistan. The study estimates the logit model because the dependent variable is binary. The results depict that there is a positive relationship between FLFP and the age of the women. Further, the results show that there is a u-shaped relationship between female labor force participation and the education of women. Females living in a household whose head is professional; skilled agriculture, forestry, and fishery; elementary occupations like laborer, hawkers, and masons are more likely to participate in the labor market as compared to females whose household heads are managers or executives. FLFP is inversely related to household size. FLFP is positively related to female proportion, poverty, and foreign remittances.

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