# The Role of Family Settings on Female Participations in Labor Force: Evidence from Pakistan 

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#### Abstract

This study is designed to discuss the role of family setting on female participation in labor force by identifying different factors which rather influence and restrain female to participate in labor force. The ratio of female participation in labor force is low as compared to male in Pakistan. This study uses the secondary household data from surveys. The required information on labor force participation, family structure and family size are obtained from the Labor Force Survey (LFS). The data for this study are taken from labor force surveys of three-year data sets from 2010-2011, 2012-2013 and 2014-2015. Descriptive Statistics is used to analyze the results in this study by using regression. Statistical tests are used to find out the relationship between different variables. The sample distributions of this study is based on female by location that is rural vs. urban regions, literacy of the head of household and further each provinces of Pakistan. Province and year fixed effects model is used to estimate the positive and significant and negative and insignificant impact on female participants in labor force by regression coefficients. The results show positive, also negative and insignificant impact on female participation in labor force which differs in different situations. This study is concluded by different factors which either influence or restrain female to participate in labor force and the family setting play an important role on female participation in labor force.


Keywords: Female, Family Setting, Family structure, Labor Force Participation, Pakistan

## INTRODUCTION

This study explains the significant role of female participation in labor force in the development of Pakistani society by studying the role of family setting on female participation in labor force. Pakistan is ranked

[^0]the sixth largest country by population and labor force of Pakistan is ranked at ninth number in the world (Labor Force Surveys 2013-2014). According to vision (2025) sets an ambitious target of an increase in female participation in labor force from current level which increases from 25 percent to 45 percent by 2025 (World Bank, 2018). Labor force participation is a sizable segment in population (Sabir, 2015).Women contribution to the measured economic activity, economic growth and well-being is below its potential as compared to men in the country (Isran \& Isran, 2012). Therefore, in order to grow economically as a selfsufficient nation; a comprehensive strategy is followed to eliminate gender disparity or inequality.

Few decades ago the focus on European policy making on increasing employment was paralleled by gender discussion which was to improve the labor force participation of female as compared to male. Such family policies are made to be instrumental for closing the gender gap (Gehringer, Klasen, \& Witkowska, 2014). The national policies have put forward to have impact on economy in majority of the developing countries for low ratio of female participation in labor force. Out of 100 women only $35 \%$ women were participant of labor market by 2014 (Jensen, 2017). In developing countries female labor force participation is a coping mechanism which results in economic shocks that hit within the household. The growth, development and prosperity of any country including Pakistan are based on the both male and female hard work and success. The level of female to participate in labor force is an effort to maximize their utility in restriction of time and income (Ramirez \& Ruben, 2015).

Different researchers highlight that even in current scenario women have stood shoulder to shoulder with men for the general cause of humanity.Aboohamidi and Chidmi (2013) discussed that female labor force participation has been decreased recently in some of the Middle East and North African (MENA) countries which are the Egypt, Morocco, Turkey and also Pakistan.

The lives of Pakistani female have changed during the past thirty years. They now participate fully in economic activities. Labor force participation is the decision of an individual from 15-60 years of age to be an active participant of work force; the individuals who are working or searching for work are participant of labor force from the overall population within a country. The decision is based on a female to play her
role in the economy of the nation by taking part in the labor force where women contribute a significant segment and half of the total population in a nation.

Female participation in labor force has brought modifications than the historical point of view. Those female who are the active participants of labor force with their skills, their demands and bargaining power will have rapid change with the changing environment (Isran \& Isran, 2012).Women contribute a significant segment in the workplace as they are always ready to bring the necessary skills and knowledge and cope up with the challenges of the $21^{\text {st }}$ century. Gender equality gap is being bridged by experiencing the positive impact of women in the workforce(Hummel, 2017).

Literature identified several factors that either influence or restrain participating women in job market, inter alia, education, age, family Income, marital status, number of children, family size, and family structure. The significance of female in job market is justified by many researchers from the identified factors but so far there have not been such empirical studies on the role and effect of family setting such as family structure and family size on female participation in labor force in Pakistan. It is further recommended to fill the gap which has been identified from literature. So the current study is designed to fill the gap by two ways. First; the study uses the household variables that are the family size and family structure. Secondly; the study divides the sample based on control variables, age, literacy rate; the educated and uneducated head of the households and location that is urban and rural areas in order to tease out the impact whether there exist different trends in household setting which may either compel or restrain women to work.Furthermore, the study uses the secondary household level data from the Labor Force Surveys (LFS), Pakistan. The required information on labor force participation, family structure and family size are collected from the surveys of three data sets that are from (2010-2011), (2012-2013) and (2014-2015).

A family is a combination of members living together male, female and children. Bhasin (2016) explained the family is defined as the human beings who live together in a non-professional manner and take care of the human values like love, care and affection within a family. A nuclear family or singular family consists of limited members that are a father, a mother and their children. A joint family also known as an extended
family. Members in a joint family include father, mother, their children, brothers and sisters as well as grandparents. Both types of families collectively are known as family structure. Family size is defined as the number of individuals living within a family.

Family structure and family size play an important role for a female to actively participate in labor force so a female should be given equal priority and should be encouraged in a family to participate in labor force. Government should make policies for female to be facilitated in order to actively participate in labor force. Because in this era female are also active and energetic in comparison of male so they should be given equal opportunities for their employment status.

The authority and the decision of participating in labor force are depended upon the structure, composition, and maintenance of a family (Pervez et al. 2008).Anam and Muhammad (2014) clarified female living in joint families get more chances to participate in labor force, because of the financial pressure more individuals in a family need more income for their consumption. Ruqia et al. (2015) discussed that household activities increase due to family size. The human resources of a country are shown by two sided process; firstly, human resources are considered to be an asset in the shape of human capital. Secondly the more increase in population growth creates more hurdles for developing countries like Pakistan. According to the labor force survey of (2010-2011) the female participation rate is 13.29 million out of 57.24 million. Female labor force is not necessary to be the solution of the problem like social equality and independence and empowerment of women in the society, but it only creates linkage to the economy of a country (Jensen, 2017).
Furthermore, it is also discussed that the female living in rural joint families does not participate in labor force because in rural areas the majority of the female work in agriculture sectors. Participation rate of unmarried female is higher in two provinces, Punjab and Sindh but the participation rate of unmarried female in Balochistan and KPK is below the potential of contribution in the economic activities.(M. Z. Khan \& Hafeez, 2017).

## THEORETICAL FRAMEWORK

This study is based on Work-Leisure Choice Theory developed by Mincer in1960's. According to the theory it is the choice of female to participate in labor force. It is based to take decision on one choice over the other, an opportunity cost to be an active participant in labor force. So the
theory which is under discussion is a base for the current study that is the role of family setting on female participation in labor force. This theory is explained as the choice of a female to participate in workforce whether a female chooses work or leisure. The female prefers to participate in workforce and gains the profit of it or she may prefer to take advantage of leisure time.

Hosney (2016) discussed in the households, the suppliers of labor always seek to maximize their utility. It becomes a trade-off between how much time is devoted for work and how much time is devoted for leisure. Choosing one alternative is based on the remuneration from work and wage rate, as much the amount of wage rate is higher so the leisure becomes less attractive and work becomes more attractive. So, this relation will have two effects; Substitution effect and Income effect.

Firstly, those female who are not employed in labor force then higher wage encourage them to participate in labor force. Secondly, those female who are already employed in labor force then higher wage encourages them to be more and more active participant of labor force. In the current study the theory matches the family setting that is the need of this trade -off happens in family size as the number of individuals are less and limited, a male source of earning is enough for the family, so in this situation a female may get more time to devote for leisure and less time for work. But on the opposite side as the number of individuals in a family increase more income is needed to be consumed. In the family structure, that is the single family and joint family, the same situation is discussed for the single family depended upon the number of individuals living in a family and a source of earning. On the other side in a joint family whether in rural or urban area a female devotes more time for work and less time for leisure because of financial pressure.

## RESEARCH METHODOLOGY

## Data Sources

The current study discusses the role of family setting on female participation in labor force by using secondary household level data from the Labor Force Surveys (LFS), Pakistan. The required information on labor force participation, family structure and family size are collected from the survey.These household level surveys are conducted by the Bureau for each province of Pakistan. The sample of survey is national and provincial representative but not available at the district level. Villages/enumeration
blocks are the primary sampling units (PSUs) and households are the secondary sampling units (SSUs).

This study uses the Labor Force Surveys for the years; 2010-2011, 2012-2013 and 2014-2015. By using the 9 or 10 -digit processing codes all three surveys are combined. The variables of interest for this study are female participation in labor force. The information of employment of female is extracted from the surveys' question whether the individual is employed. Location is coded as urban (1) and rural (2) and gender is coded as male (1) and female (2) but in this study, I use only one gender that is female because this piece of work is being conducted on female in the households of all the provinces of Pakistan. All individuals of 15 to 60 years are included in the sample.

## Empirical Model

In order to estimate the impact of family structure and family size on female labor force participation, the following empirical model is employed:

$$
L F P_{i h t}+\alpha+\beta \mathrm{X}_{i h t}+\lambda \mathrm{Y}_{i h t}+\varepsilon_{i h t},
$$

Where LFP is an outcome variable of interest which represents the female participation in labor force. The unit of observation in this study is female in the household who is whether employed or unemployed within the age $15-60$ years. It is a dummy variable holds a value 1 if a woman participates in the labor force and 0 otherwise. X is the variable of interest which represents family setting (family structure) and (family size). Y is the control variable at the individual level. Family structure is also a dummy variable which holds a value of 1 for singular family and 0 for joint family. The family size is a continuous variable which represents the number of individuals in the household. Subscripts $i, h$, and $t$ represent individual, household, and time respectively. Control variables, Y, are also used in the empirical model. Age (15-60 years) of the woman, age square, children per woman, woman literacy level (whether a woman can read and write). $\varepsilon$ Is the idiosyncratic error term. The model is estimated by OLS via STATA 12.

## RESULTS AND DISCUSSIONS

## Descriptive Statistics

The data for this study comes from the labor surveys (different issues). Table 1 shows descriptive statistics of the variables of interest. This
table shows the year wise summary statistics. After cleaning the data, I obtained 64339 observations for all the variables for the year (2010-11), 61336 observations for the year (2012-13) and 70149 observations for the year (2014-2015) at the household level. The descriptive statistics show that a little increase in the percentage of female participation in labor force over the years; as $21 \%$ female participated in the labor force for the year (201011) which increased to $24 \%$ for the year (2012-13) and $29 \%$ for the year (2014-2015). A positive trend of female participation in labor force is observed in Pakistan (See Figure 1 in the Annexure). Coming to the variables of interest, i.e. family structure and family size; family structure defines as whether the participating woman belongs to a single family or a joint family. About $51 \%$ of woman in the sample belong to singular family in 2010-11 which increased to $52 \%$ in 2012-13 and $55 \%$ in 2014-2015. This variable also shows an increasing trend of singular family in Pakistan (See Figure 2 in the Annexure). On the other side, the family size consists about 7.74 individuals in 2010-11, 7.55 individuals in 2012-13 and 7.39 in 201415. According to descriptive statistics, in Pakistan there is a decreasing trend of family size (See Figure 5 in the Annexure).

The age of female is restricted between 15-60 years. On average the age of participating female in labor force is 31.5 years in all three surveys of labor force. The Table 4.1 shows there is $0.65 \%$ children per women lived in a family by the year (2010-11), this will bea positive impact on female participation in labor force for joint families on the other side it causes a negative impact because as the number of children increase the female may not get time to be a participant of labor force. The percentage of children per woman decreased by the year (2012-2013) as it was $0.61 \%$ and a slight difference between the years (2010-11) and (2014-15) as the percentage for (2014-15) was $0.64 \%$. The percentage of last variable being discussed is the literacy rate of female in the household is $41 \%$ by the year (2010-11), an increase in the percentage of literacy by the year (2012-13) is $44 \%$ and a slight decrease caused in the literacy of female by the year (2014-2015) as it is $43 \%$. Such slight differences in the percentages of variables have positive and negative impacts on female participation in labor force.

## Table 1: Descriptive Statistics: Year wise Distribution

| Variables | 2010-11 |  | 2012-13 |  | 2014-15 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Observations | Mean | Observations | Mean | Observations | Mean |
| Women Participation in Labor Force (\%) | 64339 | 21 | 61336 | 24 | 70149 | 29 |
| Singular family (\%) | 64339 | 51 | 61336 | 52 | 70149 | 55 |
| Family Size (Number of Individuals) | 64339 | 7.74 | 61336 | 7.55 | 70149 | 7.39 |
| Woman Age (15-60 Years) | 64339 | 31.5 | 61336 | 31.5 | 70149 | 31.5 |
| Children per woman | 64339 | 0.65 | 61336 | 0.61 | 70149 | 0.64 |
| Literacy (Whether she can read and write) | 64339 | 41 | 61336 | 44 | 70149 | 43 |

Note: Author's calculation. Data Source: Labor Force Survey (Various Issues)

Table 2: Descriptive Statistics: Regional Distribution

| Variable | Urban |  | Rural |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Observati ons | Mea | Observatio ns | Mea |
| Women Participation in Labor Force (\%) | 79167 | 15 | 116657 | 32 |
| Singular family (\%) | 79167 | 4 | 116657 | 52 |
| Family Size (Number of Individuals) | 79167 | 7.5 | 116657 | 7.6 |
| Woman Age (15-60 Years) | 79167 | $\begin{gathered} 31 . \\ 5 \end{gathered}$ | 116657 | 31. 5 |
| Children per woman | 79167 | $\begin{gathered} 0.5 \\ 2 \end{gathered}$ | 116657 | 0.6 9 |
| Literacy (Whether she can read and write) | 79167 | 61 | 116657 | 30 |

Note: Author's calculation. Data Source: Labor Force Survey (Various Issues)

According to the labor force surveys, $15 \%$ of women in urban areas are participated in labor force while the woman participation rate is $32 \%$ in rural areas of Pakistan. The percentage of singular family in the urban
area is $54 \%$ while in rural area the percentage is $52 \%$. Furthermore, the size of the family in urban area is 7.5 individuals while in rural area it is 7.6 individuals. The average age of female in labor force is same in rural and urban areas, 31.5 years. There are 52 children per 100 women in urban area while 69 children per 100 woman in rural area in Pakistan. Beside these variables the literacy rate is also discussed as the percentage of the literacy of female in urban area is $61 \%$ while there is a decrease in the percentage of literacy in rural area that is $30 \%$. It proves that the ratio of female participation in labor force is less in rural area as compared to urban area.

| Variable | Punjab |  | Sindh |  | KPK |  | Ballochistan |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Observations | Mean | Observations | Mean | Observations | Mean | Observations | Mean |
| Women | 87796 | 30 | 47414 | 17 | 36837 | 15 | 23777 | 38 |
| Participation in Labor Force (\%) |  |  |  |  |  |  |  |  |
| Singular family <br> (\%) | 87796 | 52 | 47414 | 62 | 36837 | 43 | 23777 | 55 |
| Family Size (Number of Individuals) | 87796 | 7.2 | 47414 | 7.14 | 36837 | 8.78 | 23777 | 7.94 |
| Woman Age (1560 Years) | 87796 | 31.5 | 47414 | 31.7 | 36837 | 30.9 | 23777 | 32.13 |
| Children per woman | 87796 | 0.55 | 47414 | 0.65 | 36837 | 0.64 | 23777 | 0.87 |
| Literacy (Whether she can read and write) | 87796 | 53 | 47414 | 40 | 36837 | 36 | 23777 | 21 |

Note: Author's calculation Data Source: Laboof Force Surrey (Various Issues)

Table 3 shows the summary statistics of the variables of interest according to provincial distribution. The percentage of woman in the labor
force in Punjab province is $30 \%, 17 \%$ in Sindh, $15 \%$ in KPK while $38 \%$ in Balochistan. The percentage of singular family is $52 \%$ in Punjab, $62 \%$ in Sindh, $43 \%$ in KPK and $55 \%$ in Balochistan Furthermore, there are 7.2 individuals in a household in Punjab, 7.14 individuals in, 8.78 individuals in KPK and 7.94 individuals in Balochistan. The average age of female participant in labor force is about 31-32 years in all provinces of Pakistan. The number of children per woman in Punjab is $0.55,0.65$ in Sindh, 0.64 in KPK and 0.87 in Balochistan. The percentage of literacy rate of female in Punjab is $53 \%, 40 \%$ in Sindh, $36 \%$ in KPK and $21 \%$ in Balochistan which defines that the percentage of literacy is greater in Punjab as compared to other provinces that has a positive impact on female participation in labor force.

Table 4: Descriptive Statistics: Educated Vs. Uneducated Family Head

| Variable | Un-educated <br> Family Head <br> Observations |  | Mean | Educated <br> Family Head <br> Observations |  | Mean |
| :--- | :--- | :--- | :--- | :---: | :---: | :---: |

Note: Author's calculation. Data Source: Labor Force Survey (Various Issues)

Table 4. Shows descriptive statistics for the educated head and uneducated head of the household. Educated head is coded as (1) whereas uneducated head is coded as ( 0 ). The results show 81468 observations have been collected for labor force participation and all factors included for uneducated head of the family while 114356 observations for the educated head of the family. $31 \%$ female participate in labor force if the family head is uneducated while $20 \%$ female participate if the family head is educated. Furthermore $50 \%$ is for singular family for the uneducated family head while $55 \%$ for the educated family head. The percentage distribution for the family size if the family head is uneducated is $7.83 \%$ whereas for the educated head is $7.35 \%$. Maximum age of the female observed is 31.6 years for the uneducated family head and 31.4 years for educated family head. Number of children per women in a family is $0.66 \%$ in the uneducated family head and is $0.6 \%$ for the educated family head. Literacy rate of female for the uneducated family head is $22 \%$ while there is an increase in the literacy rate of female is $58 \%$ for the educated family head.

## Analysis of Results

The data for female participation in labor force are collected from the labor force surveys of the years (2010-11), (2012-2013) and (20142015). The dependent variable is female participation in labor force, which is a dummy variable coded as 1 if the woman participated in the labor force and zero otherwise. The independent variable of interest is family setting which includes family structure and family size. Family structure represents singular family coded as (1) and joint family coded as ( 0 ), and the family size is represented by the number of members within the household. In the current study beside the outcome variable and variables of interest some other control variables are used which are ages of female (15-60 years), age square, children per woman and literacy level of the female whether she can read and write or not. The analysis is also extended at the geographical region, rural vs. urban areas; at provincial level and educated head of family vs. Uneducated head of family. Year and province fixed effects are included in order to capture time and geographic fixed effects. The model is estimated by OLS in STATA 12.

Table 5. Shows the main analysis of the impact of singular family decision on female participation in labor force. The age of female is positively connected to the female participation in labor force the coefficient is 0.0114 .

The number of children per woman in a family has significant negative impact on female participation in labor force. Increasing of 1 additional child in a family reduced about 0.0124 women to participate in the labor force. In Pakistan this may be unique phenomena that the literacy level of women have a significant negative impact on women participation in labor force. Coming to the main variable of interest, the role of singular family on decision of woman participation in labor force, the coefficient is positive and significant at the $1 \%$ level. Comparing to joint family, a woman in a singular family has about $6.7 \%$ more chance to participate in the labor force. Women in a singular family living in urban region has much higher chance to participate in the labor force than women in singular family in rural area comparing with women in joint families with their respective areas. It is quite peculiar that uneducated head of the singular families allows more women to participate in the labor force than educated singular family. Further analysis at the provincial level shows that except in Balochistan province, women from singular families in all provinces of Pakistan have more chances to participate in labor force than woman from joint families.

Table 5: Impact of Family Setting (Singular rs. Joint Family) on Female Participation in Labor Force

| Overall <br> Sample | Region |  | Literate vs. Iliterate Head of Family |  |  | Provinces |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Rural | Uriom | Educated | Uneducated | Puajib | Sindh | KPK | Balochistan |
|  |  |  | Family Head | Family Head |  |  |  |  |
| $0.0067^{* * *}$ | $0.0044^{*}$ | $0.0101^{1 * *}$ | 0.0011 | $0.013^{* * *}$ | $0.015^{* * *}$ | $0.021^{* * *}$ | 0.0019 ${ }^{* * *}$ | -0.06*** |
| (0.00193) | (0.003) | (0.0025) | (0.0023) | (0.031) | (0.003) | (0.004) | (0.004) | (0.006) |
| $0.0111^{* * *}$ | $0.013^{* * *}$ | $0.012^{* * *}$ | $0.011^{* * *}$ | $0.00{ }^{* * *}$ | $0.015^{* * *}$ | $0.011^{* * *}$ | $0.018^{8 * *}$ | 0.0015 |
| (0.00046) | (0.0007) | (0.0006) | (0.0006) | (0.00078) | (0.0007) | (0.0008) | (0.0009) | (0.0015) |
| $-0.00016^{* * *}$ | -0.00018*** | $0.00017^{7 * *}$ | $-0.0002^{* * *}$ | $-0.00013^{* * *}$ | -0.0002*** | -0.00016*** | -.00022 ${ }^{* * *}$ | 0.00029 |
| (6.57) | (9.26) | (8.39) | (7.99) | (0.00001) | (0.00001) | (0.00001) | (0.000013) | (0.000021) |
| -0.0124*** | -0.011 $1^{* * *}$ | -0.027 | $-0.0011^{* * *}$ | -0.011 ${ }^{\text {*** }}$ | $-0.00{ }^{7 * * *}$ | -0.003 | $0.0034^{* * *}$ | -0.036*** |
| (0.00128) | (0.001) | (0.0018) | (0.0016) | (0.0221) | (0.002) | (0.0022) | (0.0028) | (0.0032) |
| -0.124*** | -0.15*** | $0.019^{8 * *}$ | -0.064*** | $0.146^{* * *}$ | -0.23*** | $-0.012^{* *}$ | $0.022^{* * *}$ | $0.100^{* * *}$ |
| (0.00211) | (0.0031) | (0.0029) | (0.003) | (0.004) | (0.003) | (0.0034) | (0.0043) | (0.0075) |
| 195824 | 116657 | 79167 | 114356 | 81468 | 87796 | 47414 | 36837 | 23777 |
| Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Yes | Yes | Yes | Yes | Yes | No | No | No | No |
| 0.0633 | 0.0684 | 0.0704 | 0.0573 | 0.0703 | 0.0671 | 0.0309 | 0.0138 | 0.204 |

Note: Dependent Variable: Female Labor Force Participation, whether a female (aged $15-60$ years) is a participant of labor force (Participant $=1$ ) or (Non-Participant=0). Robust standard errors in parentheses. * $\mathrm{p}<0.1$, ** p<0.05, *** p<0.01. Models

Table 6. Shows the impact of family size on woman participation in labor force. In overall sample, the effect is an inverse relationship between the family size and woman participation in the labor force and the coefficient is significant at the $1 \%$ level. More specifically, on average, if number of individuals in families increased for example by 1000 then about 6 fewer women in such families participate in the labor force. Such restriction for women participation in labor force exists in urban area only while in rural
area the coefficient is insignificant. The education level of the head of the family does not affect the decision for allowing woman to participate in the labor force as the size of the family increases. The inverse relationship between the size of the family and womanparticipation in labor force holds for all provinces except Balochistan in which there is a positive and significant relationship between the variables of interest.
Table 6: Impact of Family Size on Female Participation in Labor Force

| Outcome Variable: <br> Female Labor | Overall Sample | Region |  | Literate vs. Illiterate Head of Family |  | Provinces |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rural | Urban | Educated | Uneducated | Pumjab | Sindh | KPK | Balochistan |
| Force Participation |  |  |  | Family Head | Family Head |  |  |  |  |
| Family Size (Number of Individuals) | $-0.006^{* * *}$ | $-0.00021$ | $-0.0023^{* * *}$ | -0.0013*** | -0.0019*** | $-0.0012^{* *}$ | $-0.0062^{* * *}$ | $-0.0028^{* * *}$ | 0.016*** |
|  | (0.0003) | (0.0004) | (0.0003) | (0.0003) | (0.00041) | (0.00046) | (0.0006) | (0.00035) | (0.0011) |
| Age (15-60) Years | 0.0123*** | 0.013*** | 0.012*** | 0.014*** | 0.0096*** | 0.015*** | 0.011*** | 0.017*** | 0.0022 |
|  | (0.0005) | (0.0007) | (0.0006) | (0.0006) | (0.00078) | (0.00074) | (0.0008) | (0.0009) | (0.0015) |
| Age Square | $-0.00016 * * *$ | $-0.00018 * * *$ | $-0.00016 * * *$ | $-0.00019^{* * *}$ | $-0.00013^{* * *}$ | $-0.00022^{* * *}$ | $-0.00016 * * *$ | $-0.00022^{* * *}$ | $-0.000035^{*}$ |
|  | (6.56) | (9.25) | (8.35) | (7.97) | (0.000011) | (0.00001) | (0.000011) | (0.000013) | (0.000021) |
| Children Per <br> Woman | $-0.0114^{* * *}$ | $-0.01^{* * *}$ | -0.0262*** | $-0.011^{* * *}$ | -0.009*** | $-0.0067^{*}$ | 9.31*** | 0.0089*** | $-0.043^{* * *}$ |
|  | (0.0013) | (0.0017) | (0.0018) | (0.0016) | (0.0021) | (0.0022) | (0.0022) | (0.003) | (0.0032) |
| Literacy (Whether she can read and write) | -0.145*** | -0.015*** | 0.018*** | -0.065*** | $-0.15 * * *$ | $-0.023^{* * *}$ | -0.012*** | 0.027*** | 0.101*** |
|  | (0.0021) | (0.0031) | (0.0030) | (0.0027) | (0.0041) | (0.0033) | (0.0034) | (0.0042) | (0.0074) |
| Observation | 195824 | 116657 | 79167 | 114356 | 81468 | 87796 | 47414 | 36837 | 23777 |
| Year Fixed Effect | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Province Fixed Effect | Yes | Yes | Yes | Yes | Yes | No | No | No | No |
| R-Square | 0.0634 | 0.0684 | 0.0707 | 0.0574 | 0.0703 | 0.067 | 0.0323 | 0.0151 | 0.2084 |

Note: Dependent Variable: Female Labor Force Participation, whether a female (aged $15-60$ years) is a participant of labor force (Participant $=1$ ) or (Non-Participant=0). Robust standard errors in parentheses. ${ }^{*} \mathrm{p}<0.1, * * \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$. Models estimated by OLS. Year and Province fixed effects are included. Data Source: Labor Force Survey (various issues), PBS, Islamabad, Pakistan.

## Findings and Discussion

According to the Tables 4 and 5 my findings show that the singular family is positively and family size is negatively correlated to the women participation in labor force. The finding of this study on literacy rate show a negative impact on female participation in labor force that does not support the findings of Aboohamidi and Chidmi (2013) who discussed that the literacy rate has positive impact on female participation in labor force. Furthermore Gondal (2005) mentioned that the number of children in a family has negative and insignificant impact on female participation in labor force. When splitting the sample by urban vs. rural, I find that female (in singular family) participation in labor force is positive and statistically significant in rural regions as well as urban regions while the family size is negatively associated with labor force participation in urban region.

Furthermore, when splitting the sample by educated and uneducated family head, the findings show a positive impact of singular family on female participation in labor force The family size has negative effect on woman participation in labor force and it does not matter whether the head of the family is educated or uneducated and the relationship is statistically significant at the $1 \%$ level.

These findings support the literature in the line of discussion on the perspective that the family setting play a huge role in decision making for women in participation in labor force. In a country such as Pakistan, where family decisions are more important than individual decisions; the head of the family allow women working as a labor. My findings show a positive and significant impact singular family decision on female participation in labor force. Furthermore, if a female living in a singular family and participate in workforce then she earns income for. But if a female living in joint family participates in labor force and her earnedincome become part of the household income (Umbreen \& Kokab, 2017).

In a singular family female gets more freedom to participate in labor force. But intuitively female living in joint families can get more chances to participate in labor force due to the financial pressure. But this study does not support the latter argument. In the family setting, family size also matters for female participation in labor force as the number of family members increase then the ratio of female participation in labor force also increase so that the family size has a significant positive impact
on female participation in labor force. This finding is aligned with Azam and Rafiq (2014)study that as the family size becomes larger; it results in higher rate of female participation in labor force. Female participation in labor force has negative and insignificant impact in rural areas as rural environment does not support female for paid labor force and low payment is given due to gender inequality in the workforce(Alonso \& Trillo, 2014).

## Conclusion

The current study is designed to explain the role and importance of family setting of female participation in labor force. As compared to men in work force, female workforce also plays a significant role in the contribution of growth and development of Pakistani economy. Therefore, women need to participate in the labor force along with men in Pakistan for the well-being of the Pakistani society. Decades ago female participation in labor force was not given that much priority in academia and policy making circles as compared to men participation in labor force. But recently female are being given equal opportunities in working sectors (Whitehead, 2011).

Furthermore, different factors have been identified from literature which rather influence or restrain female participate in labor force in Pakistan. These factors include female's education, marital status, cultural values, age, or geographic location, etc. To the best of my knowledge the relationship between family structure or family size and female participation in labor force is missing in the literature. This present study is investigated the role of family setting on female participation in labor force by taking an empirical case study from Pakistan.

The findings show a positive and significant relationship between women in singular family and women participation in labor force and also a negative and significant relationship between family size and female participation in labor force. Family structure and family size play an important role for a female to actively participate in labor force so a female should be given more priority and should be encouraged in a family to participate in labor force. Government should make policies for female to get more facility in order to actively participate in labor force. Because in this era female are also active and energetic in comparison of male.

Findings show that whether in a singular family or a joint family, the education level of head of the household does not affect the female to participate in labor force whether the head of the household is educated or uneducated the required female can actively participate in labor force. Besides this the literacy rate of female has a positive impact in provincial distribution as the female from Punjab are more literate as compared to other provinces so that they can easily participate in labor force. Furthermore, the literacy rate of female also has a significant positive importance in regional distribution. Female living in urban areas is more educated than the female living in rural areas, so that female living in urban region is more participant of labor force as compared to rural areas. Women cover half of the total population in a country so by such findings it is clear that the contribution of female participation in labor force will help in the development of the societal welfare. Likewise, the findings also show that the other variables also have significant positive and negative impact on female participation in labor force accordingly in regional and provincial level distribution.

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Figure 1: Percentage of Female Participation in Labor Force in Pakistan (Source: Labor Force Survey (various Issues)

Singular Family (\%)


Figure 2: Percentage of Singular Family in Pakistan (Source: Labor Force Survey (various Issues)

## Family Size( Number of individuals)



Figure 3: Family Size (Number of Individuals per Household) in Pakistan.(Source: Labor Force Survey (various Issues)


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