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# The Role of Women Empowerment towards Inclusive Growth in Pakistan

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**Abstract**. The present study intended to explore the role of women's empowerment towards inclusive growth in Pakistan. The relationship between inclusive growth and women empowerment has been analyzed for the period from 1981 to 2018. Women empowerment has been explained with seven dimensions of gender inclusion. The ordinary least square model has been used for econometric estimation. This study helps to identify those gender factors which may promote women's empowerment towards inclusive growth. This study concludes that when women have grander accession to the labor market with the condition of equality then the impact is positive. The study finds out that women empowerment positively affects inclusive growth in Pakistan. It is concluded that women empowerment should be promoted in Pakistan to achieve the best socio-economic results.

**Keywords: Women Empowerment; Inclusive Growth: Labor Force Participation**

## I. INTRODUCTION

Inclusive growth is a process of long-term prospective as a focus on productive employment than the redistribution of income. Women empowerment is still an important issue in South Asia (Bhalla, 2011). Women-empowerment has become a popular issue during the last few years in Pakistan. Women are one of the important parts of society and are equivalent to males in every field of life. Females are conformists in the supremacy to generate, improve and transmute than men. Empowering women increase their ability to create a better society. Women constitute of more than half of the population in Pakistan. Impressive progress has been made in tumbling gender disparity over the last few years in Pakistan. Women have ever been conceded subordinate part in domestic and social affairs. Females are conscious of gender disparities and are vexing to contest those (Berik et al., 2004). The male of Pakistan has ever represented as the dominant of the division and the judgment about the problem of endowing females has always between him. Many encouraging remarks demonstrate that females can be front-runners. However various females have exposed their essence yet a plurality of them have to enhance their headship talents in many conducts. To comfort females to be prominent, they requisite to be endowed. Consequently, the liberation of females is essential to transmute an emerging South Asian region into a sprang up South Asian region. Some theories have been clarified the inverse effect of gender inequality on economic growth (Blackden et al., 2007). Women empowerment has been a red-hot issue all over the world for economic growth (Blecker & Seguino, 2012).

Enablement is a process by those females can organize themselves, make unrestricted adoptions, and improve their confidence level and control all their resource which can grow the economy (Blackden et al., 2007). There are three key rudiments of women authorization first one is self-empowerment, second is mutual-empowerment and the last one is social-empowerment, and these three factors are connected. Self-empowerment entails a single struggle, mutual-empowerment entails associations between them, and social-empowerment is spawned by eliminating political, economic, social, and legal obstacles to acquire discrete impact (Berik et al., 2004). Empowering women and increase their ability to other than didactic, regional, and financial empowerment, commutes in females' potency and societal interface, and commutes in domiciliary choice-making are indispensable (Srinivasa & Siddegowda, 2015).

This study included the variables that are not included in the previous studies to check the impact of women empowerment on inclusive growth like; female wages and women employment level. This study

is one of the very few studies in which time series techniques have been used to examine the relationship between women empowerment and inclusive growth. This study helps to identify the importance of feminism and also the importance of women for inclusive growth in the current scenario in Pakistan.

García et al., (2018) explored the role of gender-fairness on inclusive growth by using the variables such as democracy, female labor, education, fecundity, labor pool, and technology as explanatory variables on panel data of 127 counties from the time of 2000 to 2014. By using the (GMM) Generalized Method of Moments conclude that the effect of gender equality is positive on inclusive economic growth if greater the accession of females to ancillary education accession of females to the labor market and for the dynamic political partaking of females. Also found a negative relationship between fertility and economic growth. Concluded that the gender factors promote economic growth by empowering women in public offices. Ngai and Petrongolo (2017) highlighted an increase in gender equality in the services economy in the United States of America from the period of 1965 to 2008. By using the variables health, education, professional services, welfare and nonprofit and also retail trade with the help of surveys data 42 years till 2008. They found that female participation in the labor market expands the services sector in the USA and other developed countries. The comparative advantages of women have also been increased. They also investigate one of the most important changes after the 2nd world war in the labor pool is the increase in female participation in the labor market. The employment rate of 16 years to 25 years aged women is increasing more than double after 2nd world war and 45 percent women employment level in 1945 but 77 percent at the start of the 21st century and similar trend follows in many other developed countries.

Mansoureh et al. (2015) demonstrated that the upshot of occupation propagation schemes on the liberation of pastoral females in Iran with the help of a survey. A significant and positive relationship exists between variables savings, income, age, and occupation cohort with the capricious of pastoral females' enablement having the greatest influence. Training lineups incorporated in employment-generation schemes have exaggerated the employment amount.

Sharma (2013) highlights women's empowerment through microfinance and self-helping groups in West Bengal in India. The data is collected with help of interviews and questionnaires from 40 selected women from 200 total respondents by using the variables no of a self-help group, saving amounts, and loan payments. The issue of women's status in society is a debatable issue all over the world as well as in India. The goal of gender equality between males and females is a guarantee of a country's economic progress. But the real situation is that the majority of women in West Bengal are still not enjoying equal opportunities and equal rights. Women have become a target of social political and economic exploitation. But during the last few decades, self-help groups play an important role in empowerment in India. Self-help groups of women should manage by the NGOs to bring the economic independence of women. Bakshi (2015) stated that the bearing of gender-fairness on inclusive growth is greater than the bearing of inclusive growth on gender-fairness and find those structural impediments to women's rights and equality should be addressed in the households, communities, states, countries. The relationship between women's empowerment and women's employment is affected by many factors. Workplace nature of the work and income earned by women. Women empowerment has a positive impact on inclusive growth and the relation between women empowerment and employment is more important.

Sial et al. (2015) described the multidimensional poverty and gender inequality in Pakistan by using the time series data collected from the household economic survey 2005-2006 and 2010-2011 with the help of these variables like; education, health, expenditure, and living standard. Uni dimensional poverty cannot sketch a real portrait of paucity because impoverishment is above income deficit. The study concludes that multi-dimensional dearth also wilted from 51% to 36% in Pakistan. Prasisca and Sutikno (2015) demonstrated the impact of gender fairness and societal capital on pastoral improvement in Indonesia by using the variables reproductive health, empowerment, labor force participation with the help of sample data of 1000 women arranging in the age of 16 to 19 years old. Gender disparity is an imperative dispute in recent years in Indonesia. Though social capital is used as a creator for the development of a country. Gender equality is necessary to social capital in Indonesia. Development is based on social capital than gender development should be a fragment of nationwide growth emphases.

Damjanovic and Selvaretnam (2015) explained the impact of microfinance on women economic empowerment, social and political empowerment by using the panel data from 1980 to 1999 with the help of variables savings, physical assets, and the expenditure on education and health in European countries increasing well-being of women through microfinance and also clarifies the issues within the context of the gender debate and finds out the result that women-empowerment postulates to be an essential part of strategies. The access to the services of microfinance such as credit, savings, insurance, and pensions, is still unequal between men and women. Men have more control over economic power. Microfinance programs may contribute toward women's social and political empowerment of women.

Earlier work by (Bhoganadam et al., 2014; Bradshaw et al., 2013; Dipna and Sharma, 2013; Farré, 2012; Olayinka, 2013; Parveen & Rubab, 2013; Rao & Bhaskar, 2012; Sharma, 2013) suggested the positive impact of women empowerment on inclusive growth without proposing the unified empirical work. In all these studies the researchers use theoretical evidence to prove their points of view about the impact of women empowerment on inclusive growth in different countries. Earlier studies like García et al., (2018); Srinivasa and Siddegowda (2015) examined the positive impact of women empowerment on inclusive growth with the help of empirical work. But most of the researchers use the same variables like education health women employment to measure women empowerment. Most of the previous research is based on groups of countries and panel data not on the single country and time-series data. Some researchers conduct their research on women's empowerment in developed countries. The contribution of the present study in the literature is that no one checks the impact of women empowerment on inclusive growth in Pakistan before this study. This study uses some new variable to measure women empowerment that is not used in the previous studies.

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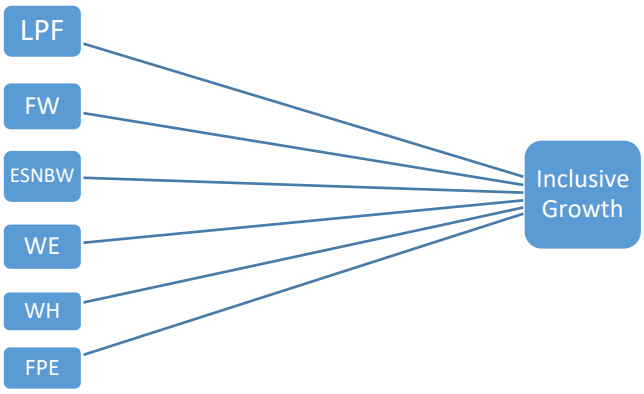


**Figure 1 Conceptual Framework**

Hypotheses of the study: The hypothesis of the study are presented below:

$H_1$: There is a higher labor force participation of women, greater inclusive growth is expected

$H_2$: Higher the primary education of women, higher inclusive growth is expected

$H_3$: With a higher maternal mortality rate, lower inclusive growth is expected.

$H_4$: With higher women's employment, higher inclusive growth is expected.

$H_5$: Higher the ease of starting a new business for women, the higher the inclusive growth is expected.

$H_6$: With a higher wage rate of females higher inclusive growth is expected.

## II. METHODOLOGY

This study is based on time series data the data of seven variables are collected on an annual basis in Pakistan. Time series data is a type of data that's is collected again and again over time or regular interval. Time series data is used to predict the upcoming results based on earlier predict values. Time series data is more reliable when data is very broad in sense of time and time-series data is said to be more reliable in the sense to forecast economic growth. Thus it is suitable for this study. Time series data can define it as a set of observations on the values that a variable takes at regular intervals or takes at different points in time.

Econometric Modeling: This study has taken the idea of the following model from Garcia's research entitled the study of gender factors and inclusive economic growth (Garcia-Guadilla, 2018). Garcia's study uses education, health, female labor, fertility, and democracy as an explanatory variable to check the impact of the gender gap on inclusive economic growth rate. Garcia research measure inclusive economic growth by using the GDP growth rate with the help of variables labor force, country, crises, and technology as a control variable and find out the positive relationship between GDP growth rate and the explanatory variable use in the model by taking the data from the world development bank. They worked on the panel data of 15 years of 127 countries including low-income as well as high-income countries by using the 1905 observations. Build a panel containing both high-income and low-income countries markets for the period of 2000 to 2014.

This study has a little different model specification than the previous study. This model has been specified the six explanatory variables. The present study applies this model to Pakistan to measure the impact of feminism on inclusive growth. The yearly data for Pakistan has been arranged for the time 1987 to 2017. This paper employs the model to measure the impacts of explanatory variables ease of starting new business for women, women employment, women health, labor force participation of women, female primary enrollment education as well as female wages as an independent variable to check the impacts of women empowerment towards inclusive growth.

$$Y_{it} = \alpha_{it} + \beta 1X1_{it} + \beta 2X2_{it} + \beta 3X3_{it} + \beta 4X4_{it} + \beta 5X5_{it} + \beta 6X6_{it} + \mu_{it}$$

This is the general form of the model. Y is the inclusive growth dependent-variable in the model, α is the intercept of the model, and (X) denotes the explanatory variables, which included in the model X1 is women labor market participation, X2 is female primary enrollments, X3 ease of starting a new business for women, X4 is employment level of women, X5 women health, X6 is female wages and μ is the error or residual term to measure the effects of all the relevant variable that are not included in the model. t is the time for conducting research and i is the country name. The model we will test, for the empirical investigation is as under (Garcia et al., 2018).

$$IG = \alpha_{it} + \beta 1LFP_{it} + \beta 2\ FPE_{it} + \beta 3\ WH_{it} + \beta 4\ ESNBW_{it} + \beta 5\ WE_{it} + \beta 6\ FW + \mu_{it}$$

Where,

IG = Inclusive growth

α = is the intercept of the model
LFP = Labor Force Participation
FPE = Female Primary Enrollment
ESNBW = Ease of starting new business for women
WE = Women employment level
WH= Women health
FW= Female wage
it = is the country name and time period respectively

**Data source and variables description:**

The variables used in the data analysis are shown in the following table (1). To prove our hypothesis we build a time series encompassing the data Pakistan from the period of 1987 to 2017. The yearly data for Pakistan has been collected for the dates 1987 to 2017. Data has been obtained from the data bank of world development bank indicators, and some other resources which contain assortments of statistic data on a diversity of topics for numerous states. In this study, we can shape a time series counting 1 states and 216 annotations. This study has utilized the data on six independent variables and one dependent variable with annual frequency from the period of 1987 to 2018 concerning Pakistan. This study utilizes a time series data methodology to estimates the model that is built in this research.

**Table 1.Data source and Description of variables**

| Variables | Description | Data Source |
|---|---|---|
| Inclusive growth | Equitable Opportunities for all participants during economic growth with paybacks sustained by every division of society. Inclusive growth provides equal opportunity to everyone through poverty reduction, employment generation. Everyone in the society is contributing towards growth and the fruits of the growth are equally divided between all participants. An index of inclusive growth has been developed with the help of determinants of inclusive growth which are poverty ($ 1.90 per day), employment generation (total), and income inequality (GINI coefficient). | WDI & GINI coefficient |
| Labor force participation | Women are included in the labor force they are willing and able to work and more than 16 years old. Labor market participation to which the number of females is active in the labor force. | WDI |
| Female primary enrollment | The education of women in this research is measure by the primary enrollment of women in Pakistan from 1987 to 2017. | WDI |
| Ease of starting a new business for women | Rules and regulations, availability of debt for women, social protection of women. | Ease of starting new business index |
| Women employment | Women in the labor force earning a regular wage or salary. Women share of total employment. | WDI |
| Women Health | Women's health is measure by the Women Maternal mortality rates in Pakistan. | WDI |
| Female wage | Earnings of females are measure by the female wage that is received by working women. | WDI |

**Identification of variables:**

**Dependent variable**

**Inclusive growth:** Equitable opportunities for all participants during economic growth with paybacks sustained by every division of society. Inclusive growth provides equal opportunity to everyone through poverty reduction, employment generation. Everyone in the society is contributing towards growth and the fruits of the growth are equally divided between all participants. An index of inclusive growth has been developed with the help of determinants of inclusive growth which are poverty ($ 1.90 per day), employment generation (total), and income inequality (GINI coefficient).

**Independent variables**

**1. Labor force participation:** Women are included in the labor force they are willing and able to work and more than 16 years old. Labor market participation to which the number of females is active in the labor force. The female labor force included the number of skills as well as the unskilled female worker. It

is the sum of all kind of female worker those are willing to work some find job and some cannot find a job in Pakistan. The yearly data of 35 years is collected from the period of 1981 to 2017 of Pakistan from the website of world development indicators.

**2. Female primary enrollment:** The education of women in this research is measure by the primary enrollment of women in Pakistan from 1981 to 2017. The number of women enrolled in primary schools all over Pakistan every year in this study we collect the data of 35 years. All enrolled students cannot complete their basic studies some of them leave the study after few years. But due to the lack of availability of data of students who complete their studies. We are taken the data of enrolled students in primary education.

3**. Ease of starting a new business for women:** Rules and regulation, availability of debt for women, social protection of women. The development of any country can be measure by their women's participation in private business. The data of steps that are required to start a new business for women in Pakistan are collected from the ease of starting a new business index. 35 years of data Pakistan is collected every year from 1981 to 2017.

**4. Women employment:** Women in the labor force earning a regular wage or salary. Women's share of total employment is important for developing countries because their progress depends on both male and female workers. The yearly data of women's employment level is collected on world development indicators from the time of 1981 to 2017. The total number of employed female in Pakistan represent female employment level on a yearly base.

**5. Women Health:** Women's health is measured by the Women's Maternal mortality rates in Pakistan. The data of health expenditure in Pakistan is not available that's the main reason to take the data of maternal mortality rate. The number of women dead or expire at the time of delivery in our country Pakistan. According to my this is the best proxy to measure the female health that is available. Yearly data of 35 years is collected from the period of 1981 to 2017.

**6. Female wage:** Earnings of females are measure by the female wage that is received by working women. The data of this variable is taken from the world development indicator. 35 years of data is collected from the period of 1981 to 2017. According to the definition, the female wage is the monetary compassion paid by employers to female employees in exchange for their work.

## III. DATA ANALYSIS AND RESULT DISCUSSION

**Descriptive statistics:**

Table 2 presents the results of descriptive statistics.

**Table 2. Descriptive Statistics**

| Variable | Mean | Median | Max | Min | SD | Skew | Kurtosis |
|---|---|---|---|---|---|---|---|
| IG | 3.23 | 3.33 | 3.51 | 3.36 | 1.11 | 1.28 | 3.58 |
| LFP | 2.78 | 2.68 | 2.91 | 2.35 | 8.54 | 1.39 | 3.67 |
| FPE | 8.38 | 3.19 | 9.93 | 7.27 | 1.82 | 0.58 | 2.24 |
| ESNBW | 1.39 | 1.12 | 3.69 | 2.90 | 7.86 | 0.51 | 1.84 |
| WE | 1.88 | 1.45 | 5.83 | 3.84 | 1.48 | 1.16 | 3.39 |
| WH | 2.50 | 1.01 | 3.37 | 2.33 | 5.99 | 2.42 | 1.87 |
| FW | 1.19 | 5.61 | 2.24 | 1.17 | 2.73 | 0.38 | 2.01 |

**Note:** In the above table IG stands for inclusive growth, FW stands for female wages, ESNBW stands for ease of starting a new business for women, WH stands for women health, FW stands for female wages, WE stands for women. Employment level, LFP stands for labor force participation, FPE stands for female primary enrollment education.

Inclusive growth (IG) is the dependent variable and the average value of this variable is 3.33 which falls between 3.31 and 3.51 it means that 3.31 is the minimum value of inclusive growth in Pakistan and the maximum value is 3.51, the mean value, as well as the median value, ranges between those two limits. The standard deviation of inclusive growth is 1.11. The average value of labor force participation (LFP) is 2.71 which falls between 2.35 to 2.91 it means that 2.35 is the minimum value and 2.91 is the maximum value of labor force participation in Pakistan and the standard deviation is 8.54 of labor force participation. Female primary enrollment's mean value is 8.38 between the value of 7.27 and 9.93 with a standard deviation of 1.82. The ease of starting a new business for women (ESNBW) is another explanatory variable in the model and the mean value of this variable is 1.39 that lies between the minimum value of 1.12 and the maximum value is 3.69 as well as the standard deviation of this variable is 7.86. Women employment (WE) has its mean value of 1.88 that's lies between the maximum and the minimum values of 3.84 and 5.83 with a standard deviation of 1.48. Women's Health (WH) average value of 2.50 with max 3.37 and min of 2.33 having a standard deviation of 2.42. Female wage (FW) has a mean value of 1.19 min

value of 1.17 and a max value of 2.24 with a standard deviation of 0.38.

**Correlation Analysis:** The following table shows the positive or negative correlation between the dependent and independent variables.

**Table.3 Correlation matrix table**

| Variable | IG | LFP | FPE | ESNBW | WE | WH | FW |
|---|---|---|---|---|---|---|---|
| IG | 1 | | | | | | |
| LFP | 0.6300 | 1 | | | | | |
| FPE | 0.6553 | -0.4925 | 1 | | | | |
| ESNBW | 0.4467 | 0.3208 | 0.4245 | 1 | | | |
| WE | 0.5346 | 0.5763 | -0.6557 | 0.5294 | 1 | | |
| WH | -0.1699 | 0.5548 | 0.4557 | 0.4735 | 0.1418 | 1 | |
| FW | 0.5296 | 0.4969 | 0.2977 | 0.9181 | -0.2738 | 0.1524 | 1 |

The above table indicates that inclusive growth (IG) is negatively correlated to women's health (WH). A negative correlation means two variables are negatively associated with each other. The value between inclusive growth and women's health is negative -0.1699. The relationship of inclusive growth with all other variables is direct proportion and positive. The correlation value between inclusive growth and labor force participation is 0.6300. While with ease of starting a new business for women ESNBW, women employment level WE, female wages FW, female primary enrollment FPE is 0.4467, 0.5346, 0.5296, 0.6553 correlation respectively. The labor force participation (LFP) has negatively correlated only one variable that's is female primary enrollment and has positively correlated to all other variables. The negative value of correlation between (LFP) and (FPE) is -0.4925 and all other variables are positively associated with labor force participation. Female primary enrollment is also negatively correlated to only one variable that is women's employment level the negative value of correlation between (FPE) and (WE) is 0.6557 and all other values are positive it means female primary enrollment is highly positively correlated to all variable other than women employment level. The ease of starting a new business for women (ESNBW) is positively correlated to every variable in the table. Not even a single variable is correlated to ease of starting a new business for women. The women's employment level is negatively correlated to the female wage rate and the negative value of correlation is -0.2738. Women's employment level is positively correlated to women's health and the positive value of correlation between these two variables is 0.1418. Women's health is positively correlated to female wage rate the value of positive correlation is 0.1524.

**Augmented Dickey-Fuller Unit Root Test:** Augmented dickey fuller unit root test is used to test the stationary of the data at a level and 1st difference as well as 2nd difference at a different level of significance for example 1%, 5% as well as 10% level of significance. Stationary time series data is statistical properties like variance, mean and autocorrelation are constant over time on the other hand in non-stationary data the properties of data are changed over time.

**Table 4. ADF Unit Root Test**

| | At level | | At 1st difference | |
|---|---|---|---|---|
| Variables | Intercept | Trend & intercept | Intercept | Trend & intercept |
| IG | -5.07* | -1.81* | — | — |
| LFP | -0.07 | -2.89 | -4.49** | -4.42** |
| FPE | -1.12 | -2.79 | -4.78*** | -4.81*** |
| ESNBW | -11.54** | -4.94** | — | — |
| WE | -9.35* | -3.490* | — | — |
| WH | -3.626 | -4.234 | -4.243** | -3.632** |
| FW | -3.632 | -4.243 | -3.639*** | -4.252*** |

**Note**: *Stationary at 1% significance level, **stationary at 5% significance level and ***stationary at 10% significance level.

The study applied the augmented dickey fuller test to check the stationary of the data. Table 4 expressed the results of ADF stationary results. IG, ESNBW, WE are stationary at 1 percent, 5 percent, and 1 percent significant level respectively with intercept and trend intercept at the level. Other four variables are

significant are at first difference labor force participation (LFP) is stationary at 5 percent significant level with intercept and trend intercept, female primary enrollment (FPE) is stationary at 10 percent level of significance with intercept and trend intercept, women health (WH) is significant at 5 percent level of significance with intercept and trend intercept, and the last one female wage rate is significant at 10 percent level of significance with intercept and trend intercept.

**Granger causality tests:** Granger causality test is the procedure to inspect causality between two variables, to find out that whether one variable affects the other variable or not: Is one variable takes part in the formation of another variable? Granger causality uses the probabilistic method and employs empirical data to calculate the correlation. If the probability value is greater than 5% or 0.05 it means that two variables cannot be affecting each other's but if the probability value is less than 5% it means that two variables are affecting each other. Based on this probability we can develop a hypothesis to test Granger causality.

$H_0$: LFP does not granger cause IG.

$H_1$: LFP does granger cause IG.

As we can see in the table the probability value is greater than 5% it means that labor force participation is cannot be effecting inclusive growth. We can accept the null hypothesis and will reject the alternative hypothesis.

Moreover, the following table indicates women's health (WH) does granger cause (IG) inclusive growth because the probability value is less than 5%. We reject the null hypothesis and accept the alternative hypothesis. Similarly, female wage (FW) does granger cause ESNBW as well as women employment (WE) is this case we accept the alternative hypothesis and reject the null hypothesis. Similarly, this table explains Granger causality between all variables.

**Table 5. Pairwise Granger causality tests Results (lag 2)**

| Null Hypothesis: | Obs | F-Statistic | Prob. |
|---|---|---|---|
| LFP does not Granger Cause IG | 35 | 1.81091 | 0.1809 |
| IG does not Granger Cause LFP | | 3.87765 | 0.0318 |
| PEF does not Granger Cause IG | 35 | 5.49528 | 0.0093 |
| IG does not Granger Cause PEF | | 4.77811 | 0.0158 |
| W_H does not Granger Cause IG | 35 | 4.90584 | 0.0143 |
| IG does not Granger Cause W_H | | 2.72398 | 0.0818 |
| We do not Granger Cause IG | 35 | 3.77525 | 0.0345 |
| IG does not Granger Cause WE | | 7.15597 | 0.0029 |
| ESNBFW does not Granger Cause IG | 35 | 5.67010 | 0.0082 |
| IG does not Granger Cause ESNBFW | | 1.78677 | 0.1849 |
| FW does not Granger Cause IG | 35 | 3.51861 | 0.0424 |
| IG does not Granger Cause FW | | 1.56924 | 0.2248 |
| PEF does not Granger Cause LFP | 35 | 4.60123 | 0.0181 |
| LFP does not Granger Cause PEF | | 2.83143 | 0.0747 |
| W_H does not Granger Cause LFP | 35 | 6.51298 | 0.0045 |
| LFP does not Granger Cause W_H | | 0.11462 | 0.8921 |
| WE does not Granger Cause LFP | 35 | 1.42454 | 0.2564 |
| LFP does not Granger Cause WE | | 6.05401 | 0.0062 |
| ESNBFW does not Granger Cause LFP | 35 | 7.94068 | 0.0017 |
| LFP does not Granger Cause ESNBFW | | 0.12380 | 0.8840 |
| FW does not Granger Cause LFP | 35 | 4.75711 | 0.0161 |
| LFP does not Granger Cause FW | | 2.69125 | 0.0841 |
| W_H does not Granger Cause PEF | 35 | 20.0870 | 3.E-06 |
| PEF does not Granger Cause W_H | | 0.19885 | 0.8207 |
| WE does not Granger Cause PEF | 35 | 17.7276 | 8.E-06 |
| PEF does not Granger Cause WE | | 2.86589 | 0.0726 |
| ESNBFW does not Granger Cause PEF | 35 | 17.0566 | 1.E-05 |
| PEF does not Granger Cause ESNBFW | | 2.26924 | 0.1209 |
| FW does not Granger Cause PEF | 35 | 19.0521 | 5.E-06 |
| PEF does not Granger Cause FW | | 0.35907 | 0.7013 |
| WE does not Granger Cause W_H | 35 | 0.20887 | 0.8127 |
| W_H does not Granger Cause WE | | 4.52895 | 0.0191 |
| ESNBFW does not Granger Cause W_H | 35 | 2.45918 | 0.1026 |

| | | | |
|---|---|---|---|
| W_H does not Granger Cause ESNBFW | | 2.56623 | 0.0936 |
| FW does not Granger Cause W_H | 35 | 12.0730 | 0.0001 |
| W_H does not Granger Cause FW | | 1.94067 | 0.1612 |
| ESNBFW does not Granger Cause WE | 35 | 5.00226 | 0.0133 |
| WE does not Granger Cause ESNBFW | | 0.70349 | 0.5028 |
| FW does not Granger Cause WE | 35 | 4.30783 | 0.0227 |
| WE does not Granger Cause FW | | 0.73398 | 0.4884 |
| FW does not Granger Cause ESNBFW | 35 | 9.15113 | 0.0008 |
| ESNBFW does not Granger Cause FW | | 0.99093 | 0.3831 |

**Ordinary Least Square:**

Ordinary least-squares (OLS) have been used as the first estimation technique introduced by (Gauss, 1975). Among much regression analysis, it is an easy and accepted method to run the regression for the empirical estimation of an econometric model. Like other techniques, OLS also has some assumptions which are needed to get precise results. Some assumptions of the ordinary least square method are as follows; linearity of parameters, there must be no Hetero, no auto, no multi, and no specification error (Gujarati, 2004). Ordinary least-squares regression is a generalized linear demonstrating technique that may be used to model a single response variable that has been recorded on at least an intermission scale. This method may be applied to single or multiple explanatory variables and also categorical independent variables which have been appropriately coded (Hutcheson, 2011). The ordinary least square regression model can be extended to include multiple explanatory variables by simply adding extra variables to the equation. The ordinary least-square regression is one of the foremost methods utilized to analyses forms and data based on several other methods (Rutherford, 2001).

**Table 5. Ordinary least square method Results**

Dependent variable: IG

| Independent Variables | Coefficient | Std. Error | Prob. |
|---|---|---|---|
| CONSTANT | 0.8866 | 0.3372 | 0.009 |
| LFP | 0.0111 | 0.0039 | 0.005 |
| PEF | 0.0114 | 0.0071 | 0.109 |
| WH | -0.0036 | 0.0010 | 0.000 |
| WE | 0.0288 | 0.0016 | 0.073 |
| ESNBFW | 0.8866 | 0.3372 | 0.023 |
| FW | 0.1240 | 0.0598 | 0.047 |
| $R^2$=0.6315, Wald Chi2(6) = 43.42, Prob> Chi2 = 0.0000 | | | |

The ordinary least square method is being estimated by using the stata11. Probability values show that five variables are highly significant and one variable is insignificant. The values are rounded by three decimal points. Wald chi 2 represents the overall significance of the model. The role of women empowerment towards inclusive growth in Pakistan is estimated through the ordinary least square method model for Pakistan as a regional analysis. The study used the ordinary least square method to estimates the effect of women empowerment on the inclusive-growth.

The estimation result of the model shows that the (LFP) labor force participation of women has a significant and positive impact on inclusive growth in Pakistan. LFP in the labor pool in Pakistan shows the positive impact on inclusive growth through women empowerment. In support of Hypothesis 1, the outcomes show that the labor force participation of women significantly increases the inclusive growth of the country (β = 0.111; p= 0.005). LFP is statistically significant at the 5 percent level of significance. These results support Klasen & Gibson's study published in 2014 which suggests that an increase in women labor force participation increases inclusive growth. As the women labor force participation increases in Pakistan the faster the rate of inclusive growth in this region.

The result of this study shows that (PEF) primary enrollment of women is statistically insignificant and shows zero economic impact on inclusive growth in Pakistan. Hypothesis 2 is not confirmed because this study shows that primary enrollment of females is not related to dependent variables. These results show that (β = 0.114, p = 0.109) primary enrollment of women is statistically insignificant at the significant level of 10 percent. The insignificant result shows the men's dominance in the educational activities in this region. Primary enrollment of women in Pakistan is very low and totally under the control of men so the primary enrollment of women has no impact on women empowerment and further zero economic impact on inclusive growth in Pakistan.

Our results also support Hypothesis 3 women's health is negatively and significantly related to inclusive

growth because the increase in women's maternal mortality rate negatively affects inclusive growth. These results shows that (β = -0.036; p = 0.000) is statistically significant at the 1% level of significant. The negative relation shows that the lower the mortality rate higher the inclusive growth. These results also match with previous studies' negative impact of women mortality rate on inclusive. (WH) Women's health is always positively related to inclusive growth but we use the women's maternal mortality rate as a proxy variable of women's health. Because the maternal mortality rate of women negatively affects women's health so it further negatively affects inclusive growth in Pakistan.

The fourth variable in the model is (WE) women employment which is positively affecting inclusive growth. These results confirmed our hypothesis 4 higher the women's employment level higher the inclusive growth is expected. Results shows that (β = 0.288; p = 0.073) women employment level are significantly effects on the inclusive growth. Women employment is statistically significant at the 10% level of significance.

The second last or fifth independent variable is the ease of starting a new business for women included in the model is statistically significant means a positive economic impact on inclusive growth. These results are confirmed our hypothesis 5 that the ease of starting a new business for women is positive relating to inclusive growth and accept the null hypothesis. These results show that (β = 0.886; p = 0.023) ease of starting a new business for women is statistically significant at the 5 percent level of significance. The ease of starting a new business for women is a significant impact on inclusive growth because the business opportunities for women are very high in the modern time in this region and this can help to empower women. So ease of starting a new business for women is statistically significant and making a positive economic impact on inclusive growth in the case of Pakistan.

The last variable of this model is female wage rate (FW) has a statistically significant positive impact on inclusion in Pakistan. These results confirmed our hypothesis 6 because we accept the null hypothesis that the female wage has positively contributed to women empowerment and further inclusive growth. Results show that (β=0.1240; p=0.047) female wages are statistically significant at a 5% level of significance and have a positive impact on women empowerment and further on inclusive growth.

## IV. CONCLUSION

This study analyzed the impact of women's empowerment towards inclusive growth in Pakistan by using time-series data. Women empowerment is very important for inclusive growth in any region. So this study investigates the impact of women empowerment on inclusive growth. An increase in women's empowerment can be helpful to rise in inclusive growth. To improve the inclusive growth in Pakistan gender equality and women empowerment must be promoted in this region.

The study results show a clear picture of women's empowerment which is necessary for inclusive growth in Pakistan. The findings of this research are also matched with the findings of the former study by Garcia-Guadilla (2018) which found that gender equality has a positive impact on inclusive economic growth.

Economic growth and inclusive growth are different phenomena but because the empirical work on the relationship between inclusive growth and women empowerment is not much available before this. This study concludes that women empowerment has a positive impact on inclusive growth. This study also concludes that women's health and women's employment levels are significantly negatively related to inclusive growth in terms of education and access to resources.

The study concludes that the effects of women empowerment are positive on inclusive growth for the grander accession of women to employment opportunities and access of women to the labor market. But high mortality rate or females health has a negative effect on inclusive growth. Several restrictions could affect the applicability of results since the study utilized proxies when the proper measurement was not available for the variables like women's health. From the study results, we can conclude that the existence of gender disparity in Pakistan is an obstacle to inclusive growth. We should not ignore women at any stage of life rather they should be equal participants.

For future studies, it is recommended to u compute an index of women-empowerment. Furthermore, the moderating role of gender can be used in upcoming investigations.

The policy recommendation of this study is that education is the basic human right of everyone in a society. An educated woman is more likely to be aware of her rights and to adopt a job which further leads to increased empowerment. There is a need to create decent and productive employment

opportunities for women to access economic resources. The key to inclusive growth in Pakistan is that women must have economic rights and social protection in this country. In Pakistan, the health expenditure on women should be increased and governments should promote women empowerment. The share of women in political activities must be increased because women's political participation in this region is very minute. Business opportunities for women must be promoted in this region because it is a key for gender equality and enhancing inclusive growth. Policies that increase women's employment and earning capabilities must be adopted. In short, it is the need of time to promote women empowerment in Pakistan for inclusive growth because inclusive growth is not possible without women empowerment.

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