Vol. 3 No.2 2025

RECOGNIZED IN "Y" CATEGORY BY

Research Consortium Archive
P(ISSN) : 3007-0031
E(ISSN) : 3007-004X
https://rc-archive.com/index.php/Journal/about

IMPACT OF FEMALE LITERACY RATE AND FEMALE LABOR PARTICIPATION RATE ON ECONOMIC GROWTH OF PAKISTAN

Nadia Bibi
Student of BS Economics at Govt. Postgraduate College Mansehra, Khyber Phkhtunkhwa.

Dr. Naseer Shahzada
Assistant Professor of Economics at Govt. Postgraduate College Mansehra, Khyber Phkhtunkhwa Email: economypk@gmail.com

Prof. Syed Zia Hussain Shah
Head of Department of Economics at Govt. Postgraduate College Mansehra, Khyber

Publisher : EDUCATION GENIUS SOLUTIONS
Review Type: Double Blind Peer Review

ABSTRACT

Objective: This research has explored the impact of female literacy rate and female labor force participation rate on economic growth of Pakistan. **Research Gap:** There were very few previous work was available on the nexus between GDP, poverty and life expectancy for Pakistan in last 8 years. **Methodology:** This study has employed time series data from 1990 to 2024. The study employed Augmented Dickey Fuller test, Johansen co-integration and Error correlation model for the analysis of data. **The Main finding**: The results stated that Female Life Expectancy, Female Labor Force Participation Rate, and Female Literacy Rate have positive while GDP, Poverty have negative impact on GDP. **Practical implication of the finding: T**his study suggested that female life expectancy has a positive and statistically significant impact on GDP, government must invest women healthcare services to assist long term economic growth. This study also proposed that female labor force participation rate positive but statistically insignificant to GDP. It suggested that governments should prioritize initiatives that focus on providing quality education and training, enhancing healthcare system, and creating abundant employment opportunities in country to foster comprehensive socio-economic development.

Key Words: Female Labor Force, GDP, Female Life Expectancy. Johansen Co-Integration.

Introduction

The role of women in economic development has gained significant attention in recent years. Two key indicators of women's empowerment are female literacy rate and female labor force participation rate. This paper examines the impact of these two indicators on economic growth. Female literacy rate is a critical indicator of women's empowerment. Female literacy rate is a crucial indicator of a country's economic development and growth. It refers to the percentage of females aged 15 and above who can read and write. A higher female literacy rate is associated with increased economic growth, as educated women are more likely to participate in the workforce, contribute to their families' incomes, and make informed decisions about their lives. Government policies that promote female education and literacy can positively impact economic growth (World Bank, 2020).Economic inequality can limit access to education and affect female literacy rates, subsequently impacting economic growth (Bourguignon, 2020). The quality of education received by females affects their literacy rate and subsequent economic growth (Hanushek, 2020).Access to education is a critical determinant of female literacy rate and economic growth (UNESCO, 2020).

Economic growth is positively correlated with female labor force participation. A study published in the Journal of Economic Development found that a 1% increase in female labor force participation leads to a 0.2% increase in GDP growth rate (Khan et al., 2020). Female labor force participation contributes to economic

growth by increasing the supply of labor, reducing labor market distortions, and promoting economic efficiency. Female life expectancy is positively correlated with economic growth. A study published in the Journal of Economic Development found that a 1% increase in female life expectancy leads to a 0.1% increase in GDP growth rate (Klasen, 2020). Female life expectancy contributes to economic growth by increasing human capital, promoting economic efficiency, and reducing healthcare costs.

Poverty is negatively correlated with economic growth. A study published in the Journal of Economic Development found that a 1% decrease in poverty leads to a 0.2% increase in GDP growth rate (Bourguignon, 2020).Poverty reduction contributes to economic growth by increasing consumer spending, promoting economic efficiency, and reducing income inequality.

Objective Of The Study

i. To investigate the nexus between female labor force and economic growth
ii. To examine the impact of female literacy rate variables on economic growth.

Significance Of The Study

This study contributes to the existing literature on the relationship between female literacy rate, female labor force participation rate, and economic growth. It provides new insights and evidence on the impact of these variables on economic growth. The findings of this study will have important policy implications. Policymakers can use the results to design policies that promote female literacy and labor force participation, which can lead to increased economic growth. This study provides empirical evidence on the relationship between female literacy rate, female labor force participation rate, and economic growth. This study highlights the importance of gender equality in promoting economic growth. The findings suggest that policies aimed at promoting female literacy and labor force participation can lead to increased economic growth and reduced poverty. This study is relevant to several development goals, including the United Nations' Sustainable Development Goals (SDGs). The findings can be used to inform policy decisions aimed at achieving these goals, particularly Goal 5 (Achieve gender equality and empower all women and girls) and Goal 8 (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all).

Literature Review

Naheed et.al (2024) aimed to determine the determinate and impact of woman's labor force contribution on household in Pakistan. The dependent variable of the study was female labor force and independent variable of the study were female population, ratio of female workers, female headed household, female literacy rate, fertility rate, child mortality rate. They engaged unit root (augmented dickey fuller and Philips-Perron), ARDL model, and Akaike information criterion (AIC). This study concluded female

population, ratio of female workers, female headed household, and female literacy rate positively impacted FLFP. Fertility rate and child mortality rate negative impacted FLFP. Government investment in education and health-care can increase female labor force participation.

Fatima et, al (2023) examined the relationship between female labor force participation, technical education, and economic growth in Pakistan. The dependent variable of the study was economic growth (measured by GDP). The independent variables of the study were female labor force participation, technical education, male labor force participation, Gross fixed Capital formation, inflation rate, exchange rate. They used secondary data from the world development indicator (WDI), Pakistan bureau of statistics (PBS), and education statistics –all Indicator Database for the period 1991-2020. They employed auto regressive distribution lag model was used to examine the relationship between the variable. They identified a positive and significant relationship between female labor force participation, technical education and economic growth.

Haque et,al (2019) examined the relationship between labor force participation and economic growth in south Asian countries. They used to panel data from 1990 to 2017 collected from the world data bank published by the World Bank. They employed a linear panel data model to identify the relationship between labor force participation and economic growth in south Asian countries. The result showed positive relationship between labor force participation and economic growth in south Asian countries. They identified that a 1% increase in labor force participation led to a 2.16% increase in GDP. The dependent variable of the study was economic growth. The independent variables of the study were labor force participation rate, Gross capital formation, term of trades.

Maqsood (2019) analyzed the impact of female literacy rate and female labor force participation on infant mortality rate in Bangladesh India and Pakistan. A negative relationship between FLFP and IMR both FL and FLFP were significant determinants of IMR. Mishra (2018) examined the relationship between per capita gross state domestic product and female force participation rate across Indian states. Result showed significant and negative relationship existed between FLFP and per capita no significant relationship between accursed female literacy rate and FLFP.

Rehman (2018) examined the relationship between labor force participation rate, Gross fixed Capital formation, and economic growth. They used annual time series data from 1991 to 2017 collected from the world development indicator. The dependent variable of the study was economic growth (measured by GDP growth rate) the independent variable of the study were total labor force participation rate, female labor force participation, gross fixed Capital formation. They identified the Cobb- Douglas production function model to identify the relationship between labor force participation and economic growth. The result showed bidirectional

relationship between total labor force participation and economic growth and Gross fixed Capital formation and economic growth.

Mishra (2018) examined the relationship between per capita gross state domestic product and female force participation rate across Indian states. They used secondary date from 2001 and 2011 census ministry of statistic and program implementation, CSO, and NITI .The dependent variable of the study was female labor force participation rate and independent variable of the study were gross state domestic product , female literacy rate . Result showed significant and negative relationship existed between FLFP and per capita no significant relationship between accursed female literacy rate and FLFP.

Ahsan (2015) this particular paper calculates the extra GDP that will be generated due to an increase in the female labor force participation in Pakistan. The extra GDP is computed by taking into account the "extra GDP per new employee" and "the number of new female employee entering the workforce". The paper looks at the plausible GDP for the year 2011-2012 and 2013- hypothesized increased values instead of the actual participation rate. The paper sets up a hypothesize scenario. In the scenario the number of female and male in the labor force is assumed to be equal. This method sacrifices some realism in order to get a hypothesize GDP value. The reason for using this method is to show that raising labor force share of female has huge substantial GDP returns. We estimate that due to this labor force increase in Pakistan. The GDP of Pakistan of goes up by almost 50. The second part of the paper looks at the macro determinants of FLFP. For this purpose an econometric model is run based on previous studies. The results indicate that fertility is the main determinate for FLFP. While literacy is overvalued in determining FLFP.

Kanayo, (2013).in his article "The impact of human capital formation on economic growth in Nigeria" founds out the relationship between human capital and economic growth. This study analyzed that the importance of human capital formation concept on economic growth had been the fulcrum of aid and assistance by international agencies and developed countries. They study verify long-run relationship between human capital and economic growth.

Gill Kaur and Letic (2013) in their article "Female education and economic growth theoretical overview and two country cases" (June 2012) empirically investigated the relationship between female education and economic growth. This study examined that if female education affects economic growth through human capital and fertility rate. This study concluded that female education does affect economic growth both directly and indirectly through human capital and fertility rate.

Mujahid and Zafar (2012) in their article "Economic growth- female labor force participation Nexus: An empirical evidence for Pakistan" analyzed the nexus between economic growth and female labor force

participation for Pakistan economy. Augmented Dickey Fuller Test was employed for the assessment of the stationarity. ARDL bound co integration test was used to confirm the long run relationship. ARDL technique was used in this study. The results of this study showed long run and u-shaped association between economic development and female labor force participation in case of Pakistan.

Hassan and Kalim (2012) examined the relationship between economic growth, education expenditures and health expenditures in Pakistan over a period of 1972-2009. The results showed a positive and significant relationship between economic growth and education expenditures in Pakistan. Wolszczak and Derlacz (2013) examined the relationship between gender wage gap and economic growth in 18 OECD countries, over a period of 1970-2005. The results showed that gender wage gap for high, medium and low-skilled workers are negatively correlated with sectorial growth Hassan and Cooray (2015) in his article "The effect of female and male health on economic growth: cross country evidence within a production function framework" (2012) evaluate the relationship between female and male health and economic growth. The finding of this study was that male life expectancy has a positive effect on the growth of income while female life expectancy has a negative effect controlling for unobserved time and country effects in a panel of 83 countries from 1960-2009. The results continue showed that male life expectancy had a positive effect on income growth while that of female had a negative effect.

Theoretical Framework and Econometric Methodology

Theoretical Framework

Claudia Goldin (1994) had stated that economic development lead to u-shape female labor force participation rate curve in which it has been hypothesizes that FWPR decline initially with economic development, and then plateau before rising again giving it the U-shape. This is argued as being reflective of the structural shift in the economy, changing influence of income and substitution effects, and an increase in education levels of women in the population.

The investment in human capital, including education and literacy, is essential for economic growth. Female literacy rates are a critical component of human capital, and improvements in female literacy rates can lead to increased economic growth (Becker, 1964)
The improvements in female life expectancy can lead to reduced fertility rates and increased investment in human capital, including education and healthcare. This, in turn, can lead to increased economic growth (Caldwell, 1986)
The poverty can create a self-reinforcing cycle, where individuals are unable to escape poverty due to limited access to education, healthcare, and other resources (Sachs, 2005)
The labor force participation rates are influenced by a range of factors, including education, healthcare, and social norms. Improvements in these factors can lead to increased labor force participation rates and increased economic growth (Mincer, 1962)

Variable Of The Study

In this research study economic growth is dependent variable whereas life expectancy, female labor force participation rate, poverty, literacy rate, are independent variable.

$$GDP= f(FLR, FLFPR, FLE, P)$$

EG is the Economic growth, which is the function of social and institutional determinants.

Economic growth (EC) = F (Female Life Expectancy, Female Labor Force Participation, Female literacy rate, Poverty)

Table: 1: Variables of the Study

S.No	Variable	Sign of relationship	Time period	Data sources
01	EG	Positive	1990 to 2024	World development indicator
02	FLFPR	Positive	1990 to 2024	World development indicator
03	Female literacy rate	Positive	1990 to 2024	State bank of Pakistan
04	Female life expectancy	Positive /negative	1990 to 2024	World development indicator
05	Poverty	Negative	1990 to 2024	World development indicator

Econometric Methodology

This study aimed to estimate the long run relationship between economic growth and female labor force participation rate, literacy rate, poverty. The first step analyzed the long run relationship is to check the stationary of the data. If date is non stationarity at level but stationary at first difference I(1). Then there is possibility of long run relationship between dependent and independent variables. The johansen co-integration test is employed to confirm the long run relationship. If it confirm then this study employed the co integration regression and error correction mechanism for analysis.

$$EG=\beta_0 FLFPR+\beta_1 FLE+\beta_2 FLR+\beta_3 P$$

Data Sources

This research study used the TSD from 1990 to 2024. The Eviews 10 occurred used for the data analysis. The data obtained from state Bank, and world Development indicator.

Results and Discussion

Introduction

This chapter includes the analysis of data, graphs and tables of the results. The chapter included the ADF Test, Johansen co-integration test, Johansen long run Co-integration, Error correction mechanism and many diagnostics test for long run and short run.

ADF Test

This study employed the ADF to check the order of integrated.

Tables 4.2 Result of ADF Test

S. No	Variable	ADF Test statistic	Probability	Results

01	GDPPC	1st difference	-3.925355	0.0221	*I*(1)
		Level	-2.602883	0.2815	
02	FLFPR	1st difference	-6.348763	0.0000	I(1)
		Level	-2.400853	0.3726	
03	FLE	1st difference	-5.676035	0.0003	I(1)
		Level	-0.846322	0.9505	
04	FLR	1st difference	-6.487579	0.0000	I(1)
		Level	-3.333714	0.0779	
05	Poverty	1ST difference	-3.057353	0.1329	I(1)
		Level	-2.485853	0.3325	

The results indicated that handles were integrated of same order, all were stochastic at *I*(0) but stationary at I (1) the variables GPD Per Capita, female labor force participation rate , female life expectancy , Female literacy rate, and poverty are integrated at *I*(1). because the $H_0$of existences of unit root was accepted at level as the ADF statistic was less negative than its critical value at 5 % level of significance while at first difference the Ho was rejected as the ADF test statistic values was more negative when critical value. The results paved the way for Johansen co-integration now this study will test the existence of co-integration through trace value test and max-Eigen value test.

Johansen Co Integration

The decision for the presence or absence of co integration is inferred based on either the values of trace statistic or Max-Eigen statistic in Johansen test. The null hypothesis for the Johansen procedure is that there is no relationship among the series in the model while the alternative hypothesis is that there is a level relationship among the series in the model.

Tables 4.3 Unrestricted Co-Integration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace statistic	0.05 critical value	Probability
None *	0.662946	97.44093	69.81889	0.0001
At most 1 *	0.548836	61.55307	47.85613	0.0016
At most 2 *	0.408780	35.28753	29.79707	0.0105
At most 3 *	0.259520	17.94383	15.49471	0.0210
At most 4 *	0.215960	8.028740	3.841466	0.0046

According to the null hypothesis (None) meaning that there is no co-integration. But we have to check P value less than 5% or trace statistic 97.44 greater than critical value 69.81 in these case we can reject null hypothesis. because trace statistic greater than critical value or P value less than 5% so here we can say reject known meaning that this model GDPPC female labor force participation rate, female literacy rate, female life expectancy, and poverty are co-

integrated meaning that these variables moving together in the long run to verse the equilibrium. This is the results of trace model. Max-Eigen (35.88) greater than critical value (33.87) which is co-integrated and P value less than 0.05%. So we can say there is one co-integration equation. And this model meaning that all the variables moving together to as that long run equilibrium

Johansen Long Run Co-integration

The following tables explain the coefficient of relationship among the GDPPC and its determinants.

Tables.4.4. Results of Johansen long run Co-integration

S. no	Variables	Coefficients	T. statistic	p-value
01	Log(Female-Life Expectancy)	4.049079	3.163706	0.0036
02	Log(Female_ LFPR)	0.170328	0.728701	0.4718
03	Log(Literacy- Rate	0.20386	0.289855	
04	Log(Poverty)	-0.951890	-6.169745	0.0000
05	Constant	-7.146445	-1.456601	0.1556

Female Life Expectancy: A one percent increase in female life expectancy as a percentage of GDP is associated with approximately a 4.04 percentage increase in female life expectancy. The coefficient is statistically significant at the 5 percent level of significant. The P value is 0.0036 which is less than 0.05, providing strong evidence of a long run positive effect on GDP. Female life expectancy is positively effects with economic growth. Female life expectancy contributes to economic growth by increasing human capital, promoting economic efficiency, and reducing healthcare costs(Klasen, 2020)..

Female Labor Force Participation Rate: the model shows a positive coefficient; however, it is not statistically significant. The P value is 0.4718, which is greater than 0.05, indicating no strong evidence of a long run relationship with GDP. Labor force participation is positively impacts with economic growth. Labor force participation contributes to economic growth by increasing the supply of labor, reducing labor market distortions, and promoting economic efficiency. (Khan et al., 2020).

Female literacy rate: the model shows small positive coefficient 0.20386. However, the T statistic is low and insignificant, suggesting a weak or no significant long run impact on GDP Female literacy rate is positively influence with economic growth. Female literacy rate contributes to economic growth by increasing human capital, promoting economic efficiency, and reducing poverty. (Ali et al., 2020)

Poverty: As poverty increases, GDP per capita decreases. The model shows a negative and highly significant coefficient -0.951890, with a P value 0.0000. This indicated a strong and reliable long run negative relationship between poverty and economic growth.

Poverty reduction contributes to economic growth by increasing consumer spending, promoting economic efficiency, and reducing income inequality. (Bourguignon, 2020).

Constant: The coefficient is negative and not statistically significant; therefore, it does not carry out much interpretive weight analysis.

Diagnostic test of long run;

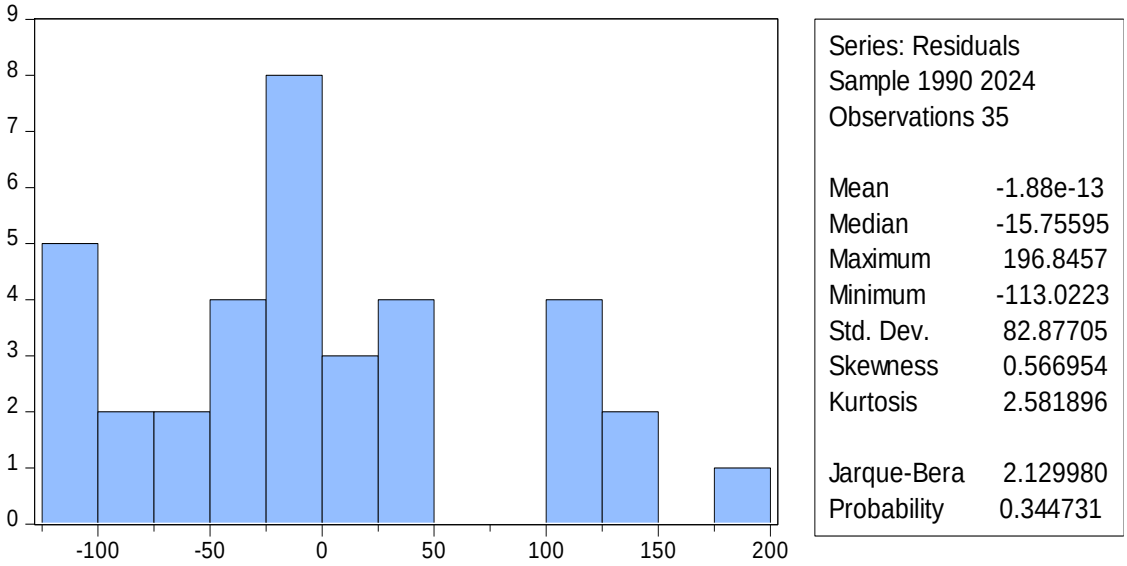
Table.4.5 Diagnostic test of long run

S.no	Test type	Test statistic	P value
01	R-squared	0.549374	
02	F-test	7.517748	
03	Breush- Pagen- Godfrey	0.891051	0.9258
04	Breush-Godfrey	16.22810	0.0922

In model, the Breush-Godfrey correlation LM test shows an F-statistic of 7.517748 with a P value of o.0922. Additionally, the Breush- pagen Godfrey test for Heteroscedasticity yields an F-statistic of with P-value 0.9258. In the case, the F-statistic values are greater than the 5% significant threshold (0.05) at a 95% confidence level, suggesting that there is no autocorrelation in the model. Additionally, the models are correctly specified and do not exhibit heteroscedasticity.

Jarque-Bera Test of Normality

Fig 1 JB Test

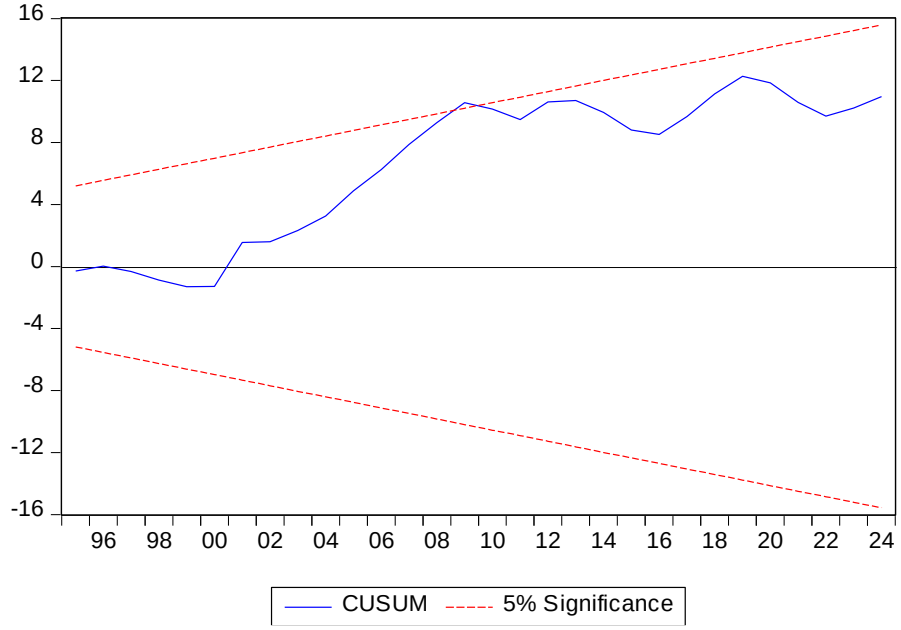


The Jarque Bera test was used to check the model specification error. It followed the χ^2distribution. The JB statistics p- value was 0.344, which showed that residual were normally distributed because p-value is greater than 0.05, so we reject null hypothesis. Also the model was correctly specified.

Cusum Test

The Cusum test was used to check the stability of the model. The blue line was inside the red lines and model was stable.

Fig 2 CUSUM Test



Short Run Analysis of GDP and its Determinants

The short run relationship between the GDP and its determinants was express through the error correction model.

Table 4.6

S. no	Variables	Coefficients	T statistic	P-values
01	D(LOG(FEMALE_LIFEXPECTANCY))	2.105157	1.225089	0.2307
02	D(LOG(FEMALE_LFPR))	-0.028659	-0.12001	0.9053
03	D(LOG(LITERACY_RATE))	-0.011046	-0.23476	0.8238
04	D(LOG(POVERTY))	-0.838068	-1.99756	0.0556
05	CONSTANT	0.015756	0.925583	0.3626
06	ECM(-1)	-0.510618	-2.98064	0.0059

Female Life Expectancy: The results indicate a Positive impact on GDP; however, this effect is not statistically significant, as the P-value (0.2307), exceed the 5% significant level. This suggests that, while the variable may influence GDP in the short term, the evidence is not strong enough to confirm a meaningful relationship at conventional significance levels.

Female Labor Force Participation Rate: The effect is statistically very insignificant in the short run. The P-value of 0.9053 for exceeds the 5% significant level, suggesting that the variable does not have a meaningful short-term influence on GDP.

Literacy Rate: The coefficient is negative, but extremely small and statistically insignificant (p-value is very high). This indicates that literacy rate has no significant short-run impact on GDP in this model.

Poverty: The negative coefficient indicated that an increase in poverty reduces in GDP. However, the P- value (0.0556) just slightly

above 0.05, meaning it's not statistically significant at the level 5% level, but marginally significant at the 10% level.

ECM: The error term is highly significant and negative, indicating that GDP correct approximately 51% of the disequilibrium from the previous period in each period, thereby adjusting toward the long run equilibrium.

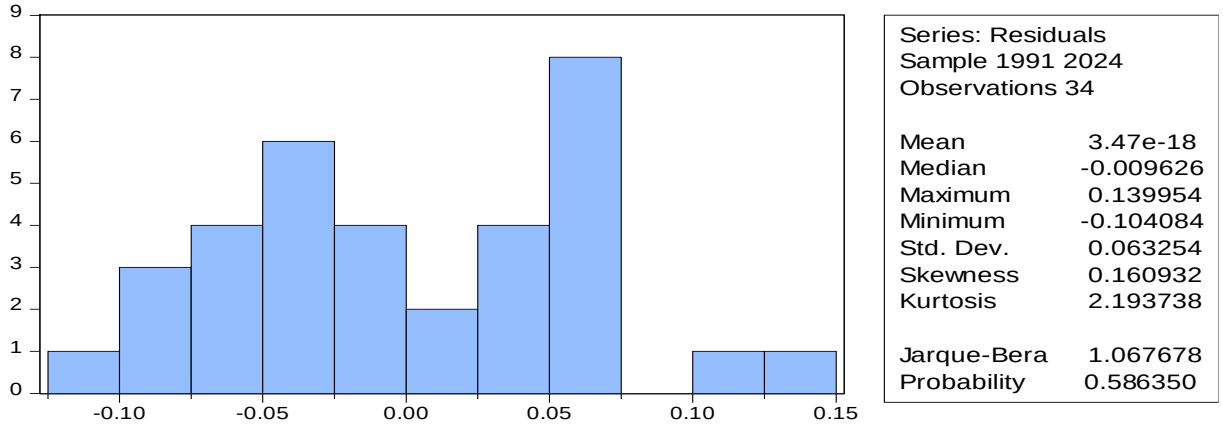
Diagnostic Test of Short Run

Table 4.7

S.no	Test type	Test statistic	p- value
01	R-squared	5.667356	
02	F-test	2.600380	
03	Breush- Pagen- Godfrey	5.667356	0.0934
04	Breush-Godfrey	12.75833	0.0258

In model, the Breush-Godfrey correlation LM test shows an F-statistic of 2.600380 with a P value of 0.0258. Additionally, the Breush- pagen Godfrey test for Heteroscedasticity yields an F-statistic of 2.600380 with P-value of 0.0934. In the case, the F-statistic values are greater than the 5% significant threshold (0.05) at a 95% confidence level, suggesting that there is no autocorrelation in the model. Additionally, the models are correctly specified and do not exhibit heteroscedasticity.

Fig 3 JB TEST



CUSUM Test of Structural Stability

The CUSUM test described that blue line was inside the red lines and model was stable.

Conclusion and Recommendation

Conclusion

The research explores the consequences of GDP, life expectancy, literacy rate, female labor force participation rate, and poverty, using comprehensive time series data spanning from 1990 to 2024. The analysis is conducted through the johansen co-integration and encompasses two distinct models. In the first model, the GDP as the dependent variables, while the explanatory variables include the Female life expectancy, Female labor force participation rate, literacy

rate, and poverty. The results reveal a positively correlated and statistically significant relationship between female life expectancy and overall GDP. In contrast, the female labor force participation shows a positive correlation with GDP, but this relationship is not statistically significant. Similarly, the literacy rate exhibits a positive correlation, yet it also does not have a significant effect on GDP. Additionally, the study discovers that poverty has a negative relationship between the economic growths, indicating that higher poverty levels are associated with lower GDP outcomes.

A one percent increase in female life expectancy lead to an approximate 4.04% increase in GDP. This means female life expectancy has a strong and statistically significant positive impact on economic growth (GDP).

When one point increase in the female labor force participation rate is associated with approximately a 0.17% increase in GDP, Labor force participation is positively correlated with economic growth. Labor force participation contributes to economic growth by increasing the supply of labor, reducing labor market distortions, and promoting economic efficiency.

1 percent increase in literacy rate leads to a 0.20% increase in GDP. Literacy rate positively impact with economic growth (GDP). . Female literacy rate contributes to economic growth by increasing human capital, promoting economic efficiency, and reducing poverty.

A 1 percent increase in the poverty leads to a 0.95% decrease in GDP. This indicated a strong and reliable long run negative relationship between poverty and economic growth. Poverty reduction contributes to economic growth by increasing consumer spending, promoting economic efficiency, and reducing income inequality

Policy Recommendetion

To Improve Female Life Expectancy

- The government should prioritize women's health, as an increase in female life expectancy positively contributes to overall economic growth. This require improved access to maternal and child healthcare, nutrition, and basic health services**.**
- Lunch awareness campaigns focused on reproductive health, hygiene, and vaccinations, especially for women in low income areas.

To increase Female Labor Force Participation Rate

- Women should be provided with vocational training to help them gain skills and access employment opportunities.
- Home- based industries should be promoted to enable women to earn income from home.
- Workplace must ensure a safe environment and offer women-specific facilities such as childcare support.
- Legal reforms should be implemented to ensure equal pay and equal employment opportunity for women.

To Improve Female Literacy Rate

- Provide financial incentive (such as stipends and scholarship) for girls' education, especially in rural areas.
- Lunch adult literacy programs for women to enable them to gain basic education.
- Create a safe and supportive environment in educational institutions so that parents feel confidence in sending their daughters to school.
- Conduct awareness campaigns to educate parents and communities about the importance of girls' education.

To Reduce Poverty

- Provide microfinance loans to women for small business.

Reference

Ali, H., Shafiq, H., Aisha, Z., Ali, F., & Amjad, M. (2023). The Relationship Between Life Expectancy, Education Levels, And Workforce Participation In Developing Nations. Qualitative Research, 23(2).

Bustelo, M., Flabbi, L., Piras, C., & Tejada, M. (2019). Female Labor Force Participation, Labor Market Dynamic, And Growth (No. Idb-Wp-966). Idb Working Paper Series. Chowdhury, A. M. R., Bhuiya, A., Chowdhury, M. E., Rasheed, S., Hussain, Z., & Chen, Crespo Cuaresma, J., Lutz, W., & Sanderson, W. C. (2012). Age Structure, Education And Economic Growth. *Empirical Economics*, 3-34. Bourguignon, F. (2020). Economic Inequality And Poverty. Journal Of Economic Development, 42(1), 1-12.

Bourguignon, F. (2020). Economic Inequality And Poverty. Journal Of Economic Development, 42(1), 1-12.Cuaresma, J. C., Lutz, W., &Kabat, P. (2012).Age Structure, Education And E. *Empirical Economics*, 2-1

Ehsan, S. (2015). Female Labor Force Participation, Its Determinants And Effect On Gdp In Pakistan (Master's Thesis, Eastern Mediterranean University (Emu)-Doğu Akdeniz Üniversitesi (Daü)).

Fatima, K., Saeed, M. Z., Ahmed, Z., & Kanwal, A. (2023). Literate & Technical Female Labor Force Participation In Pakistan's Economic Change. Pakistan Journal Of Humanities And Social Sciences, 11(4), 4358-4367.

Gill Kaur, N., & Letic, J. (2013). Female Education And Economic Growth: Theoretical Overview And Two Country Cases./ *School Of Business, Economics And Law University Of Gothenburg*

Haque, A. U., Kibria, G., Selim, M. I., & Smrity, D. Y. (2019). Labor Force Participation Rate And Economic Growth: Observations For Bangladesh. International Journal Of Economics And Financial Research, 5(9), 209-213.

Hassan, &Kalim, (2012). The Triangular Causality Among Education, Health And Economic Growth: A Time Series Analysis Of Pakistan. *World Applied Sciences Journal, 18*(2), 196-207.

Hassan, G., Cooray, A., & Holmes, M. (2012). The Effect Of Female And Male Health On Economic Growth: Cross-Country Evidence

Within A Production Function Framework. *Empirical Economics*, 1-31. Heath, R., & Jayachandran, S. (2016). The Causes And Consequences Of Increased Female Education And Labor Force Participation In Developing Countries (No. W22766). National Bureau Of Economic Research

International Telecommunication Union (Itu). (2020). Ict Development Index 2020. Itu.

Jemiluyi, O. O., & Yinusa, D. O. (2021). Female Economic Participation And Economic Growth: An Empirical Evaluation Of The Nexus For Sub-Saharan African Region. Journal Of Economics, Finance And Accounting Studies, 3(1), 72-80.

Kanayo, O. (2013). The Impact Of Human Capital Formation On Economic Growth In Nigeria. *Journal Of Economics*, *4*, 121-132.

Khan, A., Et Al. (2020). The Relationship Between Female Labor Force Participation And Economic Growth In Pakistan. Journal Of Economic Development, 42(1), 1-12.

Khan, A., Et Al. (2020). The Relationship Between Female Literacy Rate And Economic Growth In Pakistan. Journal Of Economic Development, 42(1), 1-12.

Klasen, S. (2020). The Impact Of Female Education On Economic Development. Journal Of Economic Development, 42(2), 1-15.

Klasen, S. (2020). The Impact Of Female Life Expectancy On Economic Development. Journal Of Economic Development, 42(2), 1-15.

Maqsood, F., Baneen, U., & Maqsood, S. (2019). Impact Of Female Literacy And Female's Labor Force Participation On Infant Mortality: Case Of Three South Asian Countries. Pakistan Journal Of Social Sciences, 39(4), 1257-1264.

Mahumud, R. A., Rawal, L. B., Hossain, G., Hossain, R., & Islam, N. (2013). Impact Of Life Expectancy On Economics Growth And Health Care Expenditures: A Case Of Bangladesh. Universal Journal Of Public Health, 1(4), 180-186.

Mishra, S. P. (2018). Female Labor Force Participation And Economic Growth In India: A Cross Sectional Analysis Using Census Data. International Journal Of Research And Analytical Review,5(1),190-193.

Mujahid, N., & Uz Zafar, N. (2012). Economic Growth-Female Labour Force Participation Nexus: An Empirical Evidence For Pakistan. *The Pakistan Development Review*, 565-585.

Naheed S. Waseem, M Bashir, A., Saeed, R., & Mahmood, M . (2024). Determinan Of Female Labor Force Participation In Pakistan. Pakistan Journal Of Humanities And Social Sciences, 12(1), 16-25.D Analytical Reviews, 5(1), 190economic Growth In Pakistan / *Asian Social Science*, *6*(11), 256.Rahman, M. M. (2018). Impact Of Labour Force Participation On Economic Growth In South Asian Countries.

Uwimana, O. (2021). Economic Growth And Female Labor Participation: The Case Of Rwanda (Doctoral Dissertation, University Of Rwanda).