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Literate & Technical Female Labour Force Participation in Pakistan's Economic Change

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ABSTRACT

This study examines the relationship among "female labour force participation", "technical education", and "economic growth" in Pakistan. As we know, there is more prosperity when skilled females become part of the economy. The authors assessed the secondary data sources from 2001-2020 and applied various diagnostics based on the theoretical background and research methodologies. Specifically, the Autoregressive Distributed Lag is applied for analysis as per the nature of the data. This study provides insight into how increasing the "female labour force participation rate" with "technical education" spurs "economic growth" in Pakistan. The empirical results show that technical education, female labor force participation rate, male labor force participation rate, and gross fixed capital formation positively influence economic growth. Only the inflation rate and exchange rate hurt economic growth. This study aims to guide policymakers, educators, and economic stakeholders towards measures to maximize the benefits of increased "female labour force participation" and improved technical education in Pakistan. Its results are giving more deep understanding of some critical aspects of women's employment and empowerment and provide more practical ideas for prosperous future of Pakistan. However, the study has some limitations like constraints in resources, time and specific targeted data.

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1. Introduction

In the current era of scientific and technological advancement, technical education is important to meet the demands of the times. The economic enhancement of Pakistan and all nations also depends on its skilled labour and workers. Speedily economic growth is only possible through the usage of computer science technology in modernization of hardware and software and latest technical education. Qualified technical employees are needed to develop and operate advanced technologies in the fields of commerce, trade, agriculture and industry. Technical education must be implement in Pakistani educational institutes at secondary and advanced study levels. The younger generation should be aware and encouraged to learn technical education and enhance skills. Particularly women should be encouraged to share the economic burden of society through technical education. Thus, qualified women will be able to easily get a job if they are technically strong. They can also manage their own lives by own efforts. The Pakistani government should launch a special initiatives and technical education programs for women to give them updated skills. As compared to those who have a general education, those with technical or vocational training are more likely to find job and work. As a

result, technical vocational education eliminates inequality and poverty by increasing the efficiency and competence of the entire life style (Olaitari, 2016).

Number of person working and looking for job together makes up the labor force in any country. The unemployed who are not finding jobs are not considered part of the labor force. The labor force participation rate measures the percentage of all working-age people who are employed or actively seeking employment and work. The labor force participation rate is just the measure of the active labor force in an economy. The labor force formula is the number of people aged 16 and over who are employed or actively seeking work divided by the total non-institutionalized civilian labor force in any country. The worldwide workforce, however, is significantly underrepresented by women. Due to the unequal distribution of unpaid work, including taking care of children or other family members and other productive chores that take place outside of the official labor market women may decide against or be discouraged from looking for job and employment prospects. The FLFP varies greatly between nations due to variations in economic growth, societal standards, educational attainment, fertility rates, and the availability of child care services (Verick, 2018). The type of education provided to students to help them develop their knowledge and abilities for application to a particular technology, technique-oriented training or skills-based competence. Technical education (TE) refers to a student's academic and career preparation for work using current technology and applied science. The increase in opportunities brought on by the unrestricted flow of economic activity is making it more important than ever for people to get the skills and credentials they need to adapt to these changes, and Technical Education is playing a crucial part in this. Skills development and acquisition are now seen as essential for educational advancement, labor market inclusion, and economic prosperity (Majumdar, 2008, 2010).

A huge proportion of Pakistan's female population is under-educated, under-skilled, untrained and ignorant of the labor market, depriving them of their inalienable right to engage in economic activity. They continue to face various social and cultural barriers, including insecurity, gender discrimination, harmful social norms and poverty. Fortunately, technical education is the key to addressing illiteracy or low literacy rates, poverty, unemployment or underemployment, lack of technical skills, and encouraging entrepreneurship for economic and industrial growth (Bashir, 2020). Muhammad Ali Jinnah (founder of Pakistan), stressed the value of TVET ("Technical and Vocational Education and Training") during the first education conference held in November 1947, saying: "There is an need to educate our Pakistani people in advanced science and technical education in order to enhance our future economic health, and we must see our people engaged in innovative science, commerce and especially well-planned industry in this country. But we do not forget that we have competition with rest of the world, which is moving very speedily in this upward direction. Authors emphasized that they should focus on more attention to technical and vocational education."Women's participation in the workforce helps them earn income for their families, allows them to discover their talents, and increases economic growth. The employment allows them to pursue their talents and dreams towards their goals while pursuing a career of their selection.

Finally, working women contribute to economic growth through their work. Technical education enables the women to use technologies in their profession. It not only enhances skills, but also increases the employability of people. It ensures the self-respect and dignity of the working class in the society. Technical education also helps people to get rid of unemployment, child labor, street crime, begging and other social evils. In addition, technical education is being implemented as a main key to reduce the unemployment rate, fight poverty, and advance industrial and economic development (Quisumbing, 2013).

Table 1: Country Wise Labor Force Participation Rate (2021-2022)

Variable Name	Pakistan[1]	China[2]	India[3]
LFPR	52.75%in 2022	66.9 % in 2022[4]	48.5% in 2023
FLFPR	*23.31 %in2022*	61.07 %in2022[5]	[6]33% in 2022–2023
MLFPR	80.86 % in 2022	72.62 %in 2022[7]	80.7% in 2021–2022

[1]Source: World Bank
[2] Source : CEIC DATA, Statista
[3] Source : Bureau of "Labor Statistics" latest Population Survey
[4] Source : CEIC DATA
[5]Source : Statista
[6] Source: Statista

Around the world, women face fewer earning opportunities than men. The global workforce participation rate for female is just over 50%, compared to 80% for male. When women do jobs they earn less than men. The latest evidence from household survey analysis suggests that these gender gaps are also being exacerbated by the COVID-19 pandemic. In 2022, the percentage of women in the national labor force was 56.80%. All age groups with participation rates are above 75 percent were 25 to 34, 35 to 44, and 45 to 54, with the highest percentage being 25 to 34 (77.60 percent)(The World Bank, 2022).

1.2. Research Gap and Objective

In this era, technological innovations rapidly changing working dynamics, understanding how these different advancements impact Female's participation in the labour force is crucial and important. It is important that researches must test the willingness and impact of literate and technical female labour force on Pakistan's economic change and require more discussion. The literature revealed that relatively few studies were conducted, particularly in Pakistan. This study is being conducted to find more information regarding the effects of Women's Labor Force Participation and Technical Education to test Pakistan's Economic Growth. More research is needed on how women's access to technical education affects their labor force participation and economic growth.

2. Literature Review and Theoretical Background

This part examines the empirical study of the association between Female's labor force participation, technical education, and economic growth. Numerous studies have been conducted in developing and non-developing countries to explore the relationship among these variables. Here are some notable research reviews. "Infrastructure development and Female's labor force participation in Pakistan" was the subject of a study (Ali & Jamil, 2023). In the context of Pakistan, this article examines how infrastructure development has affected women's labor force participation. The study included 19 infrastructure development variables, of which four indices were derived using "Principal Component Analysis", "Transportation Index", "Communications Index", "Public Transportation Index", and "General Index". They used annual time series data from 1985-2018, the estimate is based on the ARDL-Bound testing joint integration method and sliding window analysis. Projected results show that all infrastructure indicators have a favorable and significant impact on the share of females participating in the labor market. Road length has the biggest impact on women's participation, with a 1% enhance in road length resulting in a 0.65% increase in women's participation.

In a study Saeed, Gull, and Altaf (2022) "The effectiveness of technical and vocational education", a meta-analysis was carried out. This study sought to evaluate the effectiveness of technical and vocational education (TVET) in Punjab. After an initial literature search, more stringent inclusion and exclusion criteria were used. It turned out that the lack of funding for educational materials, tools, equipment and other necessary items did not allow educational institutions to improve the lifestyle of the rural community. The study showed that in order for institutions to have greater impact, they needed a specific goal, strategic planning, objectives, successful implementation, and adequate funding from the government. Although the TEVT curriculum was strong, it was found to have insufficient links to industry and internships were not properly organized. In a research Ghosh (2022), an empirical analysis was done among various variable, specific focus was on gender inequality and female labour market participation. Their results support the hypothesis that there is a non-linear relationship between GDP and female labor force participation. Using annual data of time series from 1991-2019, the study presents a "simultaneous equation model" that uses an equation for growth, an equation for gender, and an equation for globalization to determine factors that affect women's employment prospects in India. Using data from the Fraser Institute, an index of economic freedom was created. A-D-F unit root test was used by Phillips and Perron (1988) stationary of a time series was tested. The results of this study demonstrate how gender equality benefits the economy, especially in the areas of employment and education. India must develop growth strategies that are fair and help women. The government agency should develop the capacity of women for empowerment through social and legal implications, as well as increase the productive base of its human resources.

[7]Source : Statista

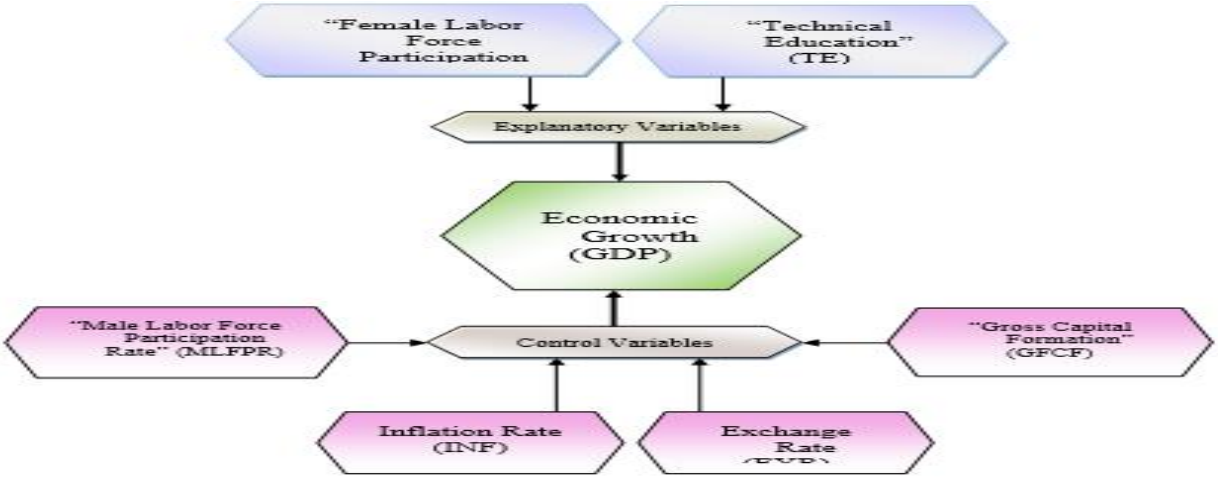
The role and factors of female's participation in the labor force to reduce household poverty was the subject of a study in the city of Debre Birhan, North Sheva Zone, Ethiopia (Mulugeta, 2021). This primary objective was to explore the role and factors affecting the "female labor force inclusion" in reducing household poverty of the city of Debre Birhan. A "logistic regression" model was applied to examine variables that affect female's labor force participation rate. Binary logit regression results showed that tuition, media coverage, credit availability, and women's educational status are positively and significantly associated with the likelihood of participation. The results of this study show that having more females in the labor force reduces the poverty of household. This study suggests that households implement family planning, promote higher education for women, expose them to the media, open public or private child care centers, and provide women with access to finance. The state and households must cooperate now to find potential solutions. A study Yakubu, Akanegbu, and Jelilov (2020) was conducted on labor participation and economic growth in Nigeria. They investigated the impact of "labor force participation" on "economic growth". Empirical analysis was performed to test the dependent and independent variables. Time series data for the years 1990-2017 from the World Bank Development Indicators were analyzed. The Vector Error Correction Model (VECM) and Johannsen Cointegration econometric approaches were used. The results demonstrate the long-term connections between the variables and TPFL and GFCF were found to be causally related to GDP. The report calls on the government to address the issues of unemployment and gender disparity in the workplace.

A study titled "Obstacles to the development of technical education in Pakistan, opinions and reviews" was conducted (Raza & Ibrahim Khalid, 2017). The purpose of this qualitative study was to determine the causes of Pakistan's inadequate technical education and to propose solutions for these problems. The primary interview questions concerned the causes of Pakistan's inadequate technical education and recommendations for its improvement. Prior knowledge was taken into account when conducting the interviews, and any inquiries or conversations about discrimination against individuals on the basis of their gender, ethnicity, religion, or province were avoided. But no questions about confidentiality or privacy were posed. A study Shah, Mahmood, and Harrison (2013) claims that the main goal of the investigation was to find out how Pakistani students felt about studying science. 1,233 students in 37 public schools in three counties were given the attitude toward Science Learning (AtSL) scale, which has a Cronbach's alpha of 0.86. According to the study's findings, students' views toward learning science improve when they do well academically, and female students' opinions were more positive than male students'. While mother's schooling and job do produce substantial disparities in attitudes toward learning science, kids' location, education, and occupation do not seem to have a significant impact on students' attitudes toward scientific learning.

2.1. Proposed Framework and Hypothesis Development

The purpose of this research is to ascertain the relationship between several variables, including female labor force participation, and technical education, with economic growth in Pakistan.

Figure 1: Framework to test the relationship among various variables



GDP is the variable that is dependent, female labor force participation and technical schooling are the independent variables, and there are control factors in this study. To do the regression analysis, the following factors were included in this order: the Exchange Rate (EXR), Inflation Rate (INF), Gross Fixed Capital Formation (GFCF), and Male Labor Force Participation Rate (LFPR).

2.2. Hypothesis of the Study

As per the analysis of literature review and based on research gap, the following hypothesis has been developed to test the relationship between "Technical Education", "Female Labor Force Participation Rate" and "Economic Growth".

H_0: There is no association between "Economic Growth" & "Technical Education" with "Female Labor Force Participation Rate".
H_1: There is association between "Economic Growth" & "Technical Education" with Female Labor Force Participation Rate".

Table 2: Summary of Variables

Sr. No	Variable	Description	Data Type	Measured by different variables	Measurement
1	FLFPR	"Female Labor Force Participation Rate"	Time Series Annual Data	"Female Labor Force Participation" (annual %)	Percentage
2	MLFPR	Male Labor Force Participation Rate	Time Series Annual Data	Male Labor Force Participation (annual %)	Percentage
3	GFCF	Gross Fixed Capital Formation	Time Series Annual Data	Gross fixed capital Formation (annual % growth)	Percentage
4	TE	Technical Education	Time Series Annual Data	In Numbers	No. of pupils
5	INF	Inflation Rate	Time Series Annual Data	CPI (consumer price index)	Percentage
6	EXR	Exchange Rate	Time Series Annual Data	Official Exchange Rate (Local Currency Units/US$)	LCU per US$ Period average
7	EG	Economic Growth	Time Series Annual Data	GDP per capita	Current US$

The above table describes the variables that together make up the model, along with their units of measurement based on the nature of the data. Table also describes the variables abbreviations, variables descriptions and data type respectively.

3. Data Sources and Research Methodology

This estimate is subject to additional sources of information gathering as information is available for additional research. The time series secondary data was used to analyses Economic Growth (EG), Female Labor Force Participation (FLFP), "Male Labor Force Participation" (MLFP), Technical Education (TE), Inflation Rate (IR), Exchange Rate (ER) and Gross Fixed Capital Formation (GFCF), all of which were used in this investigation came from World Development Indicator (WDI), Pakistan Bureau of Statistics (PBS) and Education Statistics-All Indicator database of annual data.

Table 3: Data Sources

Data Years	1991- 2020
Data Sources	WDI, (World Development Indicator) Education Statistics- All Indicators data base Pakistan Bureau of Statistics

The current study used various econometric models to reveal the relationship between Female Labor Force Participation (FLFP), Technical Education (TE) and Economic Growth (EG) in case of Pakistan. Control variable are Inflation (INF), Exchange Rate (EXR), Male Labor Force Participation (MLFP) and Gross Fixed Capital Formation (GFCF). In this method, several econometric techniques were used to study the relationship between variables obtained from secondary sources. We know that the single level test is fundamental for stationary data in time series analysis; Depending on the type of data, additional diagnostics may be used. As a starting point for our study, we used descriptive statistics, unit root, correlation, heteroscedasticity, and other diagnostic methods. Many researchers use ARDL methodology in their research because it is a widely reliable and reliable validation method that is relevant to the evaluation of time series data (Chandio et al., 2020; Sarkodie & Owusu, 2020; Wang, 2022). The following Econometric Model has been designed.

3.1 Econometric Model

$$GDP = \alpha + \beta 1FLFPR + \beta 2MLFPR + \beta 3GFCF + \beta 4INF + \beta 5EXR + \beta 6TE + \varepsilon \quad 1$$

Where,

GDP = Economic Growth
FLFPR = Female Labor Force Participation Rate
MLFPR = Male Labor Force Participation Rate
GFCF= Gross Fixed Capital Formation
INF= Inflation Rate
EXR=Exchange Rate
TE= Technical Education
A = Intercept
β= Slope
ε **=** Error Term

So by following the above Econometric Model, we run the regression analysis and different diagnostics in statistical software E-views to test the relationship between Economic Growth with other independent variables mentioned above.

4. Analysis and Result Interpretation

The set of methods used to enumerate and describe the main elements of a time series dataset is called descriptive statistics in time series research. To make informed judgments and create better time series models for forecasting, anomaly detection, and other analytical purposes, descriptive statistics are required. These models can then be used to analyze the underlying patterns and behavior of the time series.

Table 4: The Results of Pair-wise correlation Matrix

	LGDP	FLFPR	MLFPR	TE	INF	GFCF	EXR
LGDP	1.000000						
FLFPR	0.010313	1.000000					
MLFPR	0.111222	-0.844697	1.000000				
TE	-0.134609	0.921132	-0.827915	1.000000			
INF	-0.418401	-0.114771	-0.202285	0.120962	1.000000		
GFCF	0.075199	-0.726908	0.499226	-0.652710	0.342192	1.000000	
EXR	-0.115725	0.885085	-0.605945	0.875189	-0.153553	-0.755622	1.000000

Source: Author's Calculations Software E-views

The Pair Wise Correlation Matrix results are explained in table 4 above. It demonstrates how high values indicate a high degree of correlation between the variables. The correlation matrix shows the Pair-Wise Correlation Matrix. The data indicates that at (0.010313), (0.111222), (-0.134609), (-0.418401), (0.075199), and (-0.115725), LGDP correlates with FLFPR, MLFPR, TE, INF, GFCF, and EXR.which have less issues with multicollinearity. The table indicates that the data collection does not exhibit multicollinearity.

Table 5: Results of ADF for Unit Root

Variables	At Level		At 1st Difference		Conclusion
	Intercept	Trend & Intercept	Intercept	Trend & Intercept	
GDP:	-4.621141 (0.0008)	------	------	------	I(0)
FLFPR:	------	------	-5.845725 (0.0000)	------	I(1)
MLFPR:	------	------	-5.594797(0.0001)	------	I(1)
TE:	0.508209(0.0557)	------	------	------	I(0)
INF:	-2.601183(0.0032)	------	------	------	I(0)
EXR:	------	------	-6.521690 (0.0000)	------	I(1)
GFCF:	------	------	-4.870842(0.0004)	------	I(1)

Source: Software E-VIEWS 9

Table 5 describes the results of the "Augmented Dickey-Fuller(ADF)" test. These results demonstrate a lack of stationary behavior for all variables at the same level. According to research (Nkoro & Aham, 2016), the ARDL cointegration method works better with variables that integrate with different orders, I(0), I(1) or a mixture of them, and is more accurate

when there is only one longrun association among the underlying variables in a tiny sample. According to ADF in light of this, we can say that a time series is not stationary along one axis. In our estimation, the series I(0) and I(1) can be combined to establish the optimal relationship between complex type variables using the ARDL approach. As we have seen, GDP, TE and INF remain constant at their levels and intercepts. Apart from GFCF, the remaining variables FLFPR, MLFPR, EXR and GFCF are stationary at first difference and intercept. Time series are not stationary in the same order, as the ADF test shows, this can be easily done. ARDL assumes that this is where it is used.

Table 6: Results of "Breush Godfrey Serial Correlation"

F-statistic	2.545930	Prob. F(2,24)	0.0994
Obs*R-squared	5.775889	Prob. Chi-Square(2)	0.0557

Source: E-Views 9

The "Serial Correlation LM test" addresses the autocorrelation problem. On the other hand, a tiny value denotes no autocorrelation. Table 6 displays the findings gathered by the "Serial Correlation LM test." Because the probability value of the LM test is more than 5% or 0.05, the results imply that the problem of autocorrelation is absent in the data set. The probability value of the LM test is inconsequential (0.5417).

Table 7: The Results of "Breusch-Pagan-Godfrey Test"

F-statistic	1.030764	Prob. F(6,26)	0.4280
Obs*R-squared	6.341275	Prob. Chi-Square(6)	0.3861

Source: Software E-Views 9

The Breush-Pagan-Godfrey test provides an answer to the heteroscedasticity problem. When the value is insignificant, heteroscedasticity is not present. Table 7 displays the results of the Breusch-Pagan-Godfrey test. The results demonstrate that the problem of heteroscedasticity is not present in the data set because the likelihood ratio of the heteroscedasticity test is more than 5% or 0.05 and the test's probability value is insignificant (0.4280).

Table 8: Results of ARDL (Long Run Coefficients)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FLFPR	0.567793	0.032885	1.266006	0.0368
MLFPR	0.196981	0.099571	1.021351	0.0528
TE	0.443523	0.394685	1.258392	0.0564
INF	-0.189424	0.009616	-1.699261	0.0323
GFCF	0.516359	0.010136	5.944071	0.0125
EXR	-0.008533	0.002467	-3.458941	0.0792
C	-12.019230	8.973667	-13.374602	0.0475

Source: Software E-Views 9

In the table 8, ARDL results showed the cointegration of longrun from samle 1990-2022 with 29 observations. The value of the coefficient of Female Labor Force Participation Rate (FLFPR) explains the positively significant (0.0368) impact on Economic Growth (EG). The results of this study, which also demonstrate a beneficial effect on GDP, support the results (Kolapo & Adaramola,2012) that a 1 unit increase in (FLFPR) will lead to a (0.567793) percentage increase in (EG). The value of the coefficient of Male Labor Force Participation Rate (MLFPR) shows a positively significant (0.0528) impact on Economic Growth (EG). The empirical result shows that a 1 unit increase in (MLFPR) will lead to a (0.196981) percentage increase in (EG). The results of this study (Ezeanyeji & Maureen, 2019) support the findings of also demonstrate a positive impact on GDP. The value of the coefficient of Technical Education (TE) shows a positively significant (0.0564) impact on Economic Growth (EG). The empirical result shows that a 1 unit increase in (TE) will lead to a (0.443523) percentage increase in (EG).

The value of the coefficient of Gross Fixed Capital Formation (GFCF) shows a positively significant (0.0125) impact on Economic Growth (EG). The empirical result shows that a 1 unit increase in (GFCF) will lead to a (0.516359) percentage increase in (EG). The value of the coefficient of Inflation Rate (INF) shows a negatively significant (0.0323) impact on Economic Growth (EG). The empirical result shows that a 1 unit increase in (INF) will lead to a (-

0.189424) percentage increase in (EG).The value of the coefficient of Exchange Rate (EXR) shows a negatively significant (0.0792) impact on Economic Growth (EG).The empirical result shows that a 1 unit increase in (EXR) will lead to a (-0.008533) percentage increase in (EG).

Table 9: Results of "ARDL Bound Test"

Test Statistic	Value	K
F-statistic	5.166850	6
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.12	3.23
5%	2.45	3.61
2.5%	2.75	3.99
1%	3.15	4.43

Source: Software E-Views 9

Numerous research has employed ARDL bounds testing to investigate cointegration (Belloumi, 2014; Odhiambo, 2009). We assess the computed and tabular F-statistic using ARDL. Long-term cointegration among variables has been shown using a related test. Long-term linkage or cointegration of the variables is likely if the obtained F-statistic is expected to be over the upper bound. Table 9 above displays the analytics of bound testing. The F-statistics are estimated. The Bound test illustrates the process of long-term cointegration of variables. The F-statistic results are displayed in "Table 9" above. In all models in this table, the computed F-statistic value is more than the upper limit at the significance levels of 10%, 5%, 2.5%, and 1%. Co-integration, or long-term relationships, are thus present.

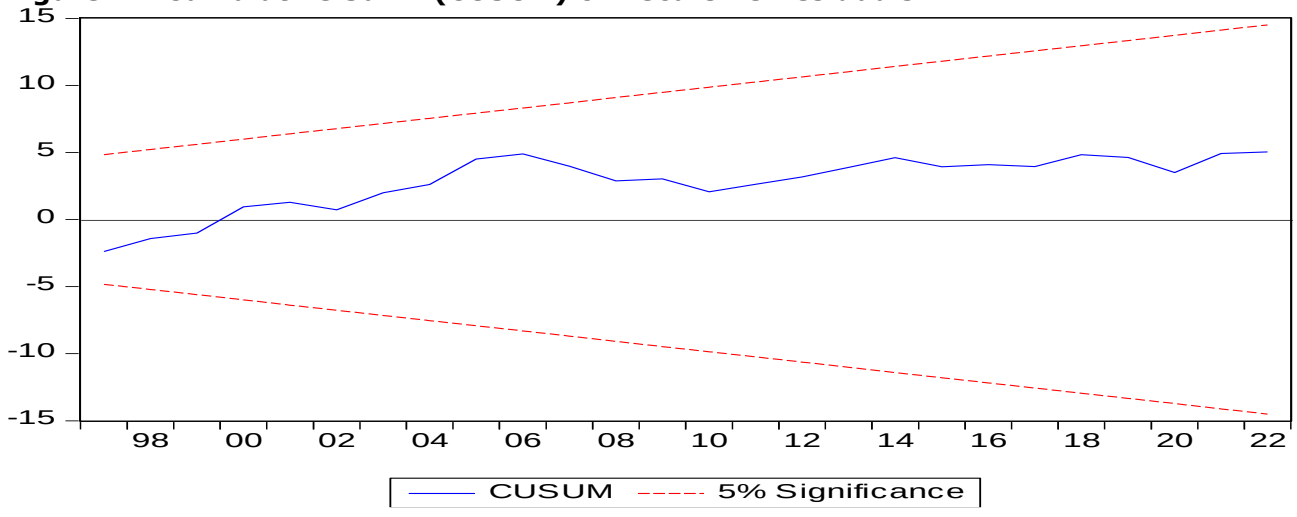
4.1. Stability Test

The authors showed the "The cumulative Sum" (CUSUM) of the recursive residuals and the "Cumulative Sum" (CUSUMQ) of the Recursive Residual Square in order to carefully assess the reliability of the estimated coefficients.

4.1.1. "Cumulative Sum of Recursive" (CUSUM)

To check if a process is deviating from its mean, use the "CSUM chart" and run a test. The process mean is the focus of the "CUSUM chart". When the sums of standardized deviations cumulative exceed a certain range, the process is said to be "out of control".

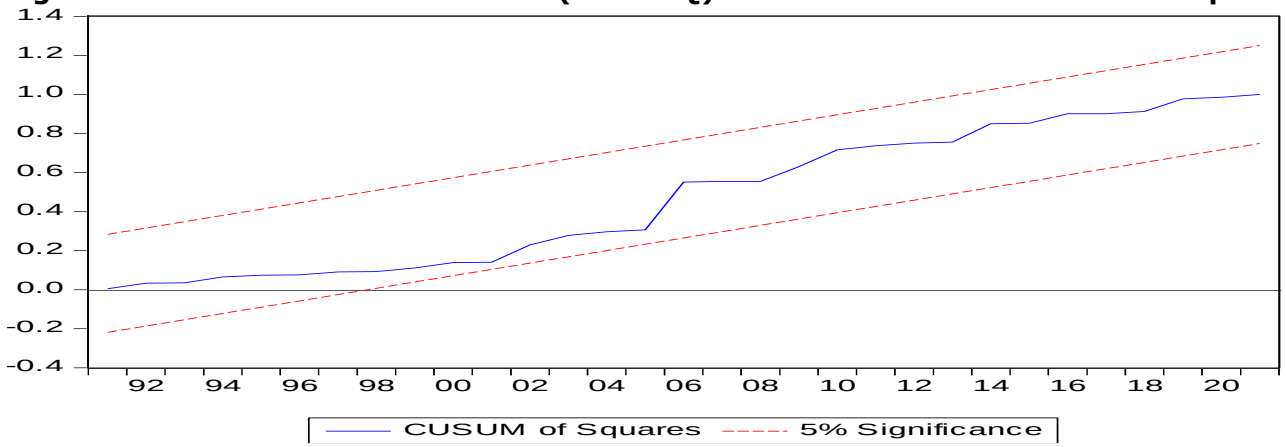
Figure 2: "Cumulative Sum" (CUSUM) of Recursive Residuals



4.1.2. "Cumulative Sum of Recursive Square" (CUSUMQ)

The "CUSUMQ test" should be used instead, as it is very good at detecting changes in the conditional model parameters whether or not the regression error variance is included in the set of changing parameters, especially towards the end of the sample.

Figure 3: "Cumulative Sum" (CUSUMQ) of Recursive Residual Square



5. Conclusion of the Study and Policy Suggestions

According to the study's findings, the growth of any economy also depends on the participation of women in the labor force. In the instance of Pakistan, the research focuses on empirically analyzing the relationship between female labor force participation and technical education in terms of growth in the economy. By applying "unit root test" like A-D-F, the stationarity of the variables was examined. Cointegration for the long-term relationship between the aforementioned variables is analyzed using the ARDL approach of evaluating cointegration among selected variables. The empirical outcome of the model demonstrates that FLFPR has a favorable positive effect on economic growth. The only factors that hinder Pakistan's economic growth are inflation and exchange rates, this could be the result of poor governance and unstable politics. MLFPR, TE, and GFCF all also have positive effects. A study Mujahid and uz Zafar (2012) shows that women's Participation is underreported due to the marginalization of women's activities and their invisible economic contributions. In the case of Pakistan, as per our results, it is desirable and necessary that women be given equal opportunities in terms of better market prospects, better earnings, more employment opportunities, etc., to help reduce the gender gap.

While we compare some other studies (Siddiqui and Lodhi, 2017), focused on policy improvement in Pakistan related to female technical education. The government also has started to promote technical programs. Pakistan's Technical Education has been improved through an initiative funded by the Asian Development Bank. However, our study recommends also that there is a long way to go. We must coordinate the activities of the various Pakistani organizations and institutions providing Technical Education. More Participation of women is needed. The curriculum needs to be reviewed and updated frequently regarding women education and empowerment. It is necessary to establish strong links with the labor market and industry. The first step is to remove political, budgetary, and administrative barriers. The Pakistani military plays a vital role in providing Technical Education. These efforts need to continue. To reduce the burden of domestic issues, government should improve women's security, and promote regions that can increase employment opportunities for women in developing areas of Pakistan. The policies must take into account both supply and demand factors, including better educational programs, access to childcare and other supportive institutions and legal measures. However, this research had several constraints, including a need for more time, funds, and particular data. The outcomes could be more refined if we prioritize time, resources, and updated data. In that scenario, we may obtain more precise outcomes through various diagnostics and approximations to understand Pakistan's most current state of technical education, female labor force participation, and economic growth.

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