The Impact of the Female Population on the Economic Growth of Nigeria

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Abstract

This study investigates the impact of the female population on the economic growth of Nigeria from 1999 to 2020. The study employed a quantitative research method with a secondary source of data collection. A times series data covering 1999 to 2020 was obtained from the World Bank Annual report. The variables considered for analysis include Annual Gross Domestic Product growth rate, expressed in % (GDP), Female school enrolment (FSE), Female (as a % of the total labour force in Nigeria) (FTLF), Life expectancy at birth, female (years) (LIFE) and Female (as a % of the total population in Nigeria) (FTP). The study adopted the ARDL method to analyse the data obtained. The study revealed that there is still a considerable gender gap in female school enrolment in Nigeria. It was equally found that women still occupy a meager status in terms of labour force participation in Nigeria) (FTLF). It was also observed that Life expectancy at birth, female (years), is approximately 50 years. Lastly, the ARDL findings revealed that there is a long run relationship between female population and economic growth in Nigeria from the ARDL Bound Testing. Most of female variables in the country were not significant and showed negative relationship with economic growth except percentage of the female population in industry. That was positively significant in Nigeria. There is a need to reverse the negative gender segregation of women in significant sectors of the economy. The study recommends that there is a need for the government to encourage the number of women going to school by providing free education at all levels for all women. In addition, the government should give women who happen to be the vulnerable group access to free education and health care as well as encourage them in business and leadership in our society.

Keywords: Female education, Labour force, Female population, Economic Growth, Nigeria.

1.0 Introduction

One of the significant cruces of the Neo-classical school of thought in their explanation of the production function is that labour and education are essential endogenous factors of human capital development, which translates a positive coefficient on the economic growth framework

More specifically, studies by Baliamoune-Lutz & McGillivray, 2009 using an Arellano-Bond GMM methodological framework was able to establish a significant and negative correlation between educational gender inequality and economic growth in Sub-Saharan Africa; in the same vein, Fofack (2012) was also of the view that increasing the female human capital stock is growth-enhancing mainly through the development of their per capita growth by more than half in percentage. Most of the studies investigating the gender disparity and growth relationship have made common emphasis on the need to approach inclusive- growth from the human capital development perspective and the labour force participation aspects (Dollar & Gatti, 1999; Cooray & Potrafke, 2011).

Moreover, despite these attendant benefits that come with improving the education of the female gender and women capacity development and how crucial they are for the growth of economies, especially those of the less-developed worlds who are strategically striving for change in trying to catch with their developed counterparts, why has the convergence to attain gender parity been so low and slow, particularly in Sub-saharan Africa. Many scholars have tried to answer this paradox in their various studies linking the social constraints of culture, the barrier of religion and even the potency of market failures as the cause (Dollar & Gatti, 1999; Cooray & Potrafke, 2011).

Some of the pioneers in the 'market failure' school of thought concerning the supply-side Dollar and Gatti (1999) opined that the negative connection between gender educational disparity and economic growth comes from market failures in developing countries to low investment in the girl-child education. While on the demand side, a 2001 World Bank study noted other factors such as distance to school, the level of educational quality in schools, and the cost of education are relatively higher for females than males. These cost-benefit frame works have lent further explanation to the persistence in the division between males and females in the attainment of education. Notably, drivers of this school of thought have argued that given the constraint to income vis a vis the return on investment of the girl-child education, which is said to be lower, households would rationality prefer to invest in the male-child education, which is less expensive.

Although, these claims have been critiqued by (Schultz 1993) on the ground that empirical evidence does not always view that lowering investment in females translates to greater economic efficiency. Moreover, the case of Sub-saharan Africa has a peculiar narrative, such that household income, investment in education and growth are still very at the sub-optimal levels. However, even in a setting of an undeniable enhancement in the pool of human educational improvement, be it male or female, the lower investment in the workforce sector and invariance to the transformative phase might reflect imperatives on the demand side, mainly when an abundance supply of work could result in high joblessness rates.

Recognizing, however, that growth does not automatically lead to a reduction in gender-based inequality. Conversely, it is estimated that gender gaps cost the economy some 15% of GDP.

Empowering women in the economy and closing gender gaps in the world of work are key to achieving the 2030 Agenda for Sustainable Development and achieving the Sustainable Development Goals, particularly Goal 5, to achieve gender equality, and Goal 8, to promote full and productive employment and decent work for all; also Goal 1 on ending poverty, Goal 2 on food security, Goal 3 on ensuring health and Goal 10 on reducing inequalities.

Nigeria ranked 11th in SSA and 38th globally on the economic participation and opportunity sub-index of the global gender gap index. According to the World Economic Forum (WEF), Nigerian women represent 65% of skilled professionals, but account for only 30% of senior corporate leadership positions. Nigeria ranked 1st on the professional and technical workers sub index, having more women than men with a ratio of 1.83 to 1.

Nigeria's educational attainment for women is low with female literacy rate at 53%, compared with men at 71%. There is also a gender gap in school enrolment rate with more male pupils being enrolled than females. Yet, some African countries have attained equal or almost equal enrolment of both sexes in schools. Nigeria falls below South Africa, Rwanda, Ghana and Ethiopia on this index.

Although increased education will not help all women, it has been shown that even basic education can help lift populations out of poverty. More advanced education will certainly help many women enter the work force because it is often a prerequisite for many jobs. The need for education will only increase in the future as the world works towards a more service-based economy. To fully realize the potential impact of women on economic growth, it is therefore crucial for women to be as well-educated as men in order to have access to the same opportunities.

The potential of women in helping improve the global economy is incredible. The inclusion of 1.5 billion women in the global workforce could have dramatic effects just as the rise of China has driven the global economy and helped lift hundreds of millions of people out of poverty. It is therefore in the interest of the global economy for foreign aid initiatives to prioritize and help women around the world, particularly when it comes to education.

There has also been a significant increase in the percentage of women working in the informal sector, which is very important because this sector is significantly smaller than the formal economy. The Bureau of Statistics estimates that 7.6% of the Nigeria's labour force are women in the informal sector compared with only 5.9% in the formal sector, and this percentage is growing. Whilst the economy is strong, women still face a myriad of challenges, from low education, income and control of family budgets to high risk of gender-based violence, low life expectancy and poverty.

2.0 Literature Review

The economic and social imperative for women's economic empowerment is clear. Greater gender equality boosts economic growth and improves development outcomes (IMF, 2019). Across countries of the world, various policies and programs have been put in place to support women in active participation in economic productivity. These policies are both at the national and international levels. Gender equality is one of the 17 global UN Sustainable Development Goals, which provide a roadmap for ending poverty, protecting the planet, and ensuring that all people enjoy peace and prosperity. Furthermore, with growing recognition that gender equality promotes economic stability and growth, the IMF has scaled up its work in this area and is committed to continuing these efforts.

The IMF (2019) will focus on deepening its understanding of the economic benefits of women's empowerment, both in the labour market and through more equal opportunities for boys and girls, also against the background of persistent megatrends, including in an environment of rapid technological change; integrating the analysis into Fund policy dialogue with member countries; providing customized assistance, workshops, and peer-learning courses in areas such as gender budgeting; and expanding collaboration with other international institutions on the subject to benefit from complementary areas of expertise.

Women's impact on the development of an economy is significant, and one way this can be done is when more women get a formal education in the economy (Okoyeuzu, Obiamaka and Onwumere, 2012). According to an April 2006 article in The Economist, the increase in female employment has been the main driving force of economic growth in the last few decades. As a result of women's economic empowerment, entire families and communities can rise out of poverty. And as a result of the fact that women in developing nations are more inclined than males to spend their earnings on their children's well-being, this has a significant and positive impact on the community.

A unique program was created for women's empowerment by the Nigerian civil engineer. This program was specially created designed to aim at economic empowerment and poverty alleviation for local and hard–to–access women. In its bid to help Nigerian women, Unilever Nigeria also created a women empowerment program in 2011. The program was designed to help low- to no income-earning rural women get the opportunity to improve their livelihoods. Unilever Nigeria aimed at strategically contributing to the UN Millennium Development Goal to end poverty and hunger and create a platform for women to significantly contribute to their communities' socio-economic development Also, The Federal Government of Nigeria's creation of a ministry of women affairs, the appointment of a few women ministers, and the encouragement of the women's movement are considered steps in the right direction (Dibie and Okere, 2015). However, with these programs and policies, Women in Nigeria continue to do derogatory jobs. They find it challenging to compete equally with their male counterparts for white colour job opportunities. As a result, the gender gap continues to widen, especially in the northern parts of the country ((Dibie and Okere, 2015).

The importance of female education cannot be over-emphasized in the present global education outlook. As it stands, education is now necessary for people to benefit from scientific advancement and contribute to it (*Oztunc,* Chi, Serin, *2015).* Furthermore, Educational opportunity for women has also received much political attention in many developing countries, and most existing studies report positive effects of female education on economic progress (Hong, Kim, Park and Sim, 2019). Educating females in an economy help give a push to every young individual in a country and provide them with the ability to discover themselves. Women being educated will enable them to join the workforce in larger numbers, which will boost the economy of the country. This access to work for women will give them the ability to be prepared for work and make the labour market large enough for the country's economy. Trying to close the gender gap for female participation in the labour market could lead to the growth of GDP as high as 35%. In a study by Cabeza-García, Del Brio, Oscanoa-Victorio (2018), it was discovered that greater access to female education has significant positive impacts on economic growth. Also, another study by Lagerlof (2003) explained the relationship between gender inequality in

education and long-run economic growth and argues that the gender gap in educational investment would lead to higher fertility, thereby causing lower economic growth. Additionally, a high gender gap in education has a detrimental effect on many indexes, including life expectancy and mortality rate (Hill and King, 1993).

Benavot (1989) discovered that male and female education might impact economic development differently since the dynamic impact of the increase in female education differs from that of male education, particularly on labour force participation, age at marriage, fertility, and migration. Malaysia between1970 and 2010, Hussin et al. (2012) examined the relationship between educational spending and economic growth. The Vector Auto Regression (VAR) approach reveals a positive co-integration between education expenditure and economic development over the long term. There is also a correlation between the variables in the short-term granger causality. This study concluded that Malaysia's GDP growth can be attributed to its human capital resources.

Zehrat, Hakan, and Zart (2015). They looked studied how women's education influences long-term economic growth in Asia and the Pacific. It focuses on the period between 1990 and 2010, using data acquired in a random sample of Asia-Pacific countries: Bangladesh, Cambodia, China, India, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Thailand, and Vietnam. Furthermore, it highlights the impact of female education on economic growth as measured by GDP, literacy, life expectancy and the female labor force. The fertility rate, female labor force participation rate, and female primary school enrolment rate are all important growth variables, according to panel regression analysis.

.Adofu and Okwanya (2018) examined female labour participation and economic growth in Nigeria. The study used the Auto regressive distributed lag model (ARDL) and the Granger causality test to assess the impact of the change in female labour on economic growth and determined the causal relationship between the variables, respectively. The result of the study revealed that the increase in women's labour force hurts the economy. However, the adverse effects on the economy are significant, according to the survey.

Another study by Yakubu, Akanegbu and Jelilov (2020) empirically studied the effect of labour force participation on economic growth in Nigeria. The study found out that there is a long-run causality running from LFPR to RGDP. The study recommends that policymakers address the problems of unemployment and gender inequality in employment. *Obinna and Charles (2015) examined the* effect of gender inequality on economic growth in Nigeria. The study stated that when women are not involved in the workforce, only part of the able workforce is being utilised and, thus, economic resources are wasted. Also, Gender equality allows for an increase in women in the working sector, thereby leading to an expansion of the labour force and increased economic productivity. Another paper by Okoroa for (2019) recommended that all Nigerians need to uphold all-around equality and eschew discrimination against women to enhance women's economic development and sustainable development in Nigeria. Okoyeuzu, Obiamaka and Onwumere (2012) also, in their paper, recommended that poverty will be reduced to the barest minimum if the government will take appropriate measures to implement and enforce laws and policies directed towards enabling women to have the same rights as Nigerian men.

Ogbeide-Osaretin and Orhewere (2020) examined the population growth, gender inequality and economic development in Nigeria and the. The result found that while sex employment ratio had an insignificant negative impact on development, female tertiary enrollment and sex employment ratio showed a significant positive impact on development. Population growth significantly and negatively impacted development. Makuochukwu (2013) also examined the effect of the female labour force on the economic growth of Nigeria between the periods of 1980 to 2010. The significant finding from the study was that female labour force employment has a positive impact on the gross domestic product (GDP) of the Nigerian economy

In the same vein, Dauda (2013) investigated female education schooling prompts on financial development in Nigeria during the period 1975 to 2008. By utilizing co-reconciliation and mistake revision strategies the outcomes show that there is for some time run relationship balance between factors. The female training has negative and male instruction emphatically affects monetary development of Nigerian economy. This study suggests that the administration should zero in on strategies with respect to the school system, increment female enlistment and work on a female commitment to monetary development. Hafner and Mayer-Foulkes, (2013) figure out the determinants of monetary development and advancement in a connection to high human turn of events, major league salary level and declining the ripeness rate over the 72 non-industrial nations in the time-frame 1980 to 2007. By utilizing co-integration, board unit root and ARDL, Long-run co-efficient the outcomes show that there is a causal connection between

the factors. This study tracked down no huge connection between the human turn of events and pay. In created countries just changes in pay and human improvement are fundamental for a created way of life; however, in agricultural nations, the ripeness rate is showing a negative connection to the human turn of events and positive to the pay.

Female autonomy promotes advantages in long-term development, according to Batent and Pleijtt's (2019) results. Despite the fact that their research was based on European data. While empirical evidence supports a favorable link between gender equality and long-term economic growth, identifying the direction of causality has been complicated by a lack of reliable data. This column examines the growth implications of gender equality using historical evidence on dairy production. Women have been able to contribute more to human capital formation and prosperity in countries with greater female autonomy, resulting in more significant economic progress in the long run

3.0 Methodology
The study was obtained from the World Bank Annual report (2021). The research is considered ideal not only because of its credibility for churning out reliable data year in year out but also because its data are readily available, more comprehensive in scale and free from error.

Based on the subject, which is population-based, the current study shall be mainly based on the theory of optimum population. The optimum idea of population as opined by Edwin Cannan in 1924 through his popular publication on "Wealth", which was later propagated by Robbins, Carr-Saunders and Dalton of the London School of Economics. According to this theory, an

optimum is one where the idyllic population is combined with other assets or means of production within a nation, would yield more income per individual.

Given these suppositions, the ideal populace is that perfect size of the populace which turns out the most significant revenue per head. Any ascent or reduction in the size of the public above or underneath the ideal level will decrease pay per head. Given the supply of regular assets, the method of creation and a load of capital in a country, there is a distinct size of populace relating to the most noteworthy per capita pay. Different things equivalent, any deviation from this ideal estimated populace will prompt a decrease in the per capita pay. If the expansion in per capita pay, the nation is – populated, and it can stand to build its populace till it arrives at the ideal level. Despite what might be expected, assuming that the expansion in populace prompts a decrease in per capita pay, the nation is finished-populated and needs a decrease until the per-capita pay is augmented. This speculation involves that individuals are wise and judicious; they gauge every one of the choices, the accessible data and their upsides and downsides before settling on financial choices; they will utilize it admirably to their most significant advantage (Gupta, 2010). Data could be used to expect change and try not to rehash previous mishaps (Iqbal & Mohammad, 2015).

To estimate the relationship between the model used for the study shall be a multivariate means of evaluation. The Specific data from the WDI (2020) secondary sources were analyzed econometrically using the ARDL method through E-views (10.0) statistical tool This is because the survey comprises of more than one explanatory variable regressed against economic growth. Particularly GDP (Gross Domestic Product) represents the dependent variable is expressed as a function of a couple of variables representing the contribution of the female group to the economy. It is expected that a modelled form of this relationship would tell the level of contribution of the female population within the nation on the level of economic productivity. Thus, functional explanation of this relationship is modelled as follows:

$$GDP = f (FTP, FEI, LEXP, LFPR) \quad (1)$$

A further mathematical representation of this relationship is expressed as follows:

$$GDP = \beta_0 + \beta_1 FTP + \beta_2 FEI + \beta_3 LEXP + \beta_4 LFPR \quad (2)$$

Meanwhile, because of the presence of stochastic factors which interplays in the relationship between variables, the econometric version of this equation is represented by:

$$GDP = \beta_0 + \beta_1 FTP + \beta_2 FEI + \beta_3 LEXP + \beta_4 LFPR + \mu \quad (3)$$

Where;

GDP = Annual Gross Domestic Product growth rate, expressed in %

FTP: Female (as a % of the total population in Nigeria)

FEI: Employment in female industry

LEXP: Life expectancy at birth

LFPR: Female (as a % of the total labour force in Nigeria)

μ = Error Term

Apriori Expectation:

$\beta_1>0, \beta_2>0, \beta_3>0, \beta_4>0$

β_0 = Intercept
$\beta_1, \beta_2, \beta_3 \ \& \ \beta_4$ = Coefficient of the independent variable.

Description of Variables
Dependent Variable
GDP (Gross Domestic Product)
Yearly rate development pace of GDP at market costs in the light of consistent local cash and is measured in percentage

Independent Variable
Female school enrolment
Gross enlistment proportion in ratio to the female population that authoritatively compares to the degree of training shown and is measured in %.

Female (% of total labour force)
Female workforce as a level of the absolute shows the degree to which women are dynamic in the workforce and is measured in %.

Life expectancy Rate
This describes the length of year an infant female would live given prevailing conditions of mortality as at the time of birth were to remain the same throughout her existence.

Female (% of total population)
This is the level of the populace that are female and is measured in percentage.

4.0 Findings and Discussion
4.1 Descriptive Analysis
This is one of the statistical methods explored to understand the nature and behaviour of the data. The exploration includes the use of the descriptive summary of the data and the graphical representation to show the nature of the data.

Table 4.1. Descriptive Statistics

	GDP (%)	FSE (%)	FTLF (%)	LIFE (%)	FTP (%)
Mean	4.34229	6.87445	48.51537	50.09713	49.5073
Median	4.631193	8.208	47.753	49.028	49.50431
Maximum	15.32916	9.3112	50.83147	55.952	49.69472
Minimum	-2.03512	2.358706	47.107	46.979	49.32092
Std. Dev.	4.081406	2.284017	1.369729	3.179939	0.125843
Skewness	0.412966	-0.71862	0.518534	0.520342	0.026783
Kurtosis	3.181285	1.955681	1.564642	1.747555	1.577848
Jarque-Bera	0.923578	4.076829	4.05036	3.425039	2.616123
Probability	0.630155	0.130235	0.13197	0.180411	0.270344
Sum	134.611	213.1079	1503.976	1553.011	1534.726
Sum Sq. Dev.	499.7363	156.502	56.28472	303.3604	0.475097
Observations	31	31	31	31	31

Source: Researcher's e-view results 2022

The descriptive summary of the variables over a period of 31 years is presented in Table 4.1 above.

From the results obtained it is indicated that the mean values of all the variables used were reported to be positive. This implies that all the variables used have recorded an increasing trend for most periods of the years being studied (that is 1990-2022).

Specifically, the positive mean value for GDP is an indication of increasing economic growth over the years (1990-2022). The positive mean value also shows increasing trend in terms of Female school enrolment, Female labour force in Nigeria, Life expectancy at birth and Female population rate. The maximum and minimum values indicate the highest points and lowest points of the variables throughout the study period. The highest value for GDP growth during the period under study was 15.3292% and was attained in the year 2002 while the lowest value for GDP at -2.035% occurred in the year 1993.

The maximum value for Female school enrolment, 9.3112% was reached in the year 2020 while the least value was 2.3587% in the year 1990. This connotes that the variable has been rising over the years. Furthermore, the Female labour force participation rate reached its highest mark in the year at 50.83while its lowest value of 47.10 was recorded in the year 1991. This indicates an increasing trend. Meanwhile, the highest value for female life expectancy at birth occurred in the year recently in the year 2020 at 55.952 while the least figure was reached in the year 1997 at 46.979. This shows that the variable has followed an increasing trend.

More so, the maximum value for and Female population rate was 49.69472 and this occurred in the year 1990 while the minimum value was 49.32092 in the year 2020. This indicates a fall over the years in percentage of the female population. In terms of skewness, all the variables were shown to be positively skewed away from the normal distribution point. The kurtosis value of GDP (3.18) which is above the critical mark of 3, the normal distribution point, indicates that the variables are mostly clustered around their mean (that is they are leptokurtic). The Jarque-Bera probability of all the variables which are greater than the 5% level of significance ($P > 0.05$) further indicates that the variables significantly deviate from normality.

4.2 Unit Root Test

Variables	At level (5% significance level)	At first difference (5% significance level)	Order of Integration
GDP	0.0262	-	I(0)
FTP	0.6411	0.0000	I(1)
LFPR	0.9829	0.0005	I(1)
FEI	0.3376	0.0442	I(1)
LEXP	0.3556	0.0097	I(1)

Source: Researcher's e-view results 2022

From the result above, it was revealed that FTP, LFPR, FEI, LEXP were proven to be stationary at the first difference. While only the dependent variable was stationary at levels.

4.3 Auto Regressive Distributed Lag Modelt result

Table 4.3: Dependent Variable: GDP growth rate

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
GDP(-1)	-0.492431	0.193609	-2.543432	0.0234
GDP(-2)	-0.421879	0.159444	-2.645943	0.0192
GDP(-3)	-0.745269	0.153209	-4.864382	0.0003
GDP(-4)	-0.305300	0.150989	-2.022003	0.0627
FTP	136.6060	63.33280	2.156955	0.0489
FEI	-7.571862	2.182068	-3.470040	0.0038
LEXP	99.24770	28.65698	3.463299	0.0038
LEXP(-1)	-161.8647	50.31599	-3.216965	0.0062
LEXP(-2)	65.93835	24.38511	2.704041	0.0171
LFPR	-0.397719	0.385060	-1.032876	0.3192
LFPR(-1)	-1.074717	0.532033	-2.020019	0.0629
LFPR(-2)	0.650425	0.420376	1.547244	0.1441
C	-6807.571	3209.562	-2.121028	0.0523

F-statistics= 11.09, R-squared= 0.904820, Durbin-Watson stat= 2.463435, Prob(F-statistic)= 0.000036
Source: Researcher's e-view results 2022

The table 4.3, presents the ARDL showing the long run co-efficients of the estimated variables. The relationship shows that in the long run, all the variables co-efficients indicated that they all had an indirect relationship with the independent variable. This is far from conforming with the expected *a priori*. The variables are measured using 5% (0.05) critical level of significance.

Thus, the co-efficient reported that FEI had a negative but insignificant impact on the economic growth of Nigeria. Hence, for everyone units increase in employment in the female industry, economic growth decreases minimally by 7.57 respectively. Similarly, LFPR reported a positive but insignificant impact on the current economic growth rate. Hence, for everyone in the female labour participation rate, the economic growth of Nigeria increases infinitesimally by 0.65 units respectively.

The co-efficient of LEXP indicated a positive and significant impact on GDP in the long-run. This means that a unit increase in the female life expectancy in Nigeria brought about 65.9 units to increase on the economic growth rate. Furthermore, FTP had positive and significant impact on the GDP in the long-run. This, therefore signifies that a unit increase in the female population rate brought about 13.6 units increase in the economic growth rate.

The f-statistics in the lower panel of table 4.3 gives the goodness of fit of the model. The approximated F-statistics value of 11.09 with a corresponding probability figure of 0.000036 implies that the data used in the estimation fitted well into the regression equation, hence, the model is adequate in explaining the impact of the independent variables on the economic growth of Nigeria. That is the independent variables jointly have a significant influence on the dependent variable.

4.4 Heteroskedasticity Test

Table 4.4

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	1.462482	Prob. F(12,14)	0.2464
Obs*R-squared	15.01893	Prob. Chi-Square(12)	0.2404
Scaled explained SS	3.661268	Prob. Chi-Square(12)	0.9888

Source: Researcher's e-view results 2022

Hypothesis
H_0: Error variances areall equal
H_1: Error variancesare all not equal
DecisionRule: If P-value < 0.05, reject H_0, other accept.

4.5 ARDL Bound Testing of Co-Integration

The ARDL bound testing of co-integration indicate whether there is a long run relationship among the variables.

Table 4.5 ARDL Bound Testing

TEST STATISTICS	VALUE	K	CRITICAL VALUE BOUNDS		
F-STATISTICS	9.458288	4	SIGNIFICANCE	BOUND I(0)	BOUND I(1)
			10%	2.2	3.09
			5%	2.56	3.49
			2.5%	2.88	3.87
			1%	3.29	4.37

Source: Researcher's e-view results 2022.

From the estimated bound test gotten, the F-statistics was revealed to be higher than lower {I(0)} and the upper {I(1)} bound of the critical values bound at 5% significance for Nigeria. The null hypothesis of no relationship in long-run will be rejected. It can then be concluded that there is a long run relationship between the variables and economic growth.

4.5 Hypothesis
H_{04}: There is no significant female (% of the total population) on the economic growth of Nigeria.

Decision rule:
The t absolute value of the t-statistic of FTPis greater than 2 at 2.156955. We hereby reject H_0. Also, since the t probability   of FTP(0.0489)is < 0.05,we hereby reject H_0, which states that there is no significant female (% of the total population) on the economic growth of Nigeria.

4.6 Long Run Co-Efficient

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
Table 4.6GDP(-1)	0.034921	0.262440	0.133062	0.8959
FTP	2148.676	1383.742	1.552800	0.1413
FTP(-1)	-2296.530	1465.308	-1.567267	0.1379
FEI	-7.771377	3.770859	-2.060904	0.0571
FEI(-1)	3.259247	2.815668	1.157540	0.2652
LFPR	-0.545025	0.380187	-1.433572	0.1722
LEXP	-7.065753	4.322362	-1.634697	0.1229
EC(-1)	-0.927377	0.496614	-1.867399	0.0815
EC(-2)	-0.664055	0.477025	-1.392075	0.1842
C	7779.208	5275.479	1.474598	0.1610

Source: Researcher's e-view results 2022

From the E-views results shown on the long run co-efficients, labeled EC. It was revealed that there is a negative relationship between those variables in the long run. And also, the probability
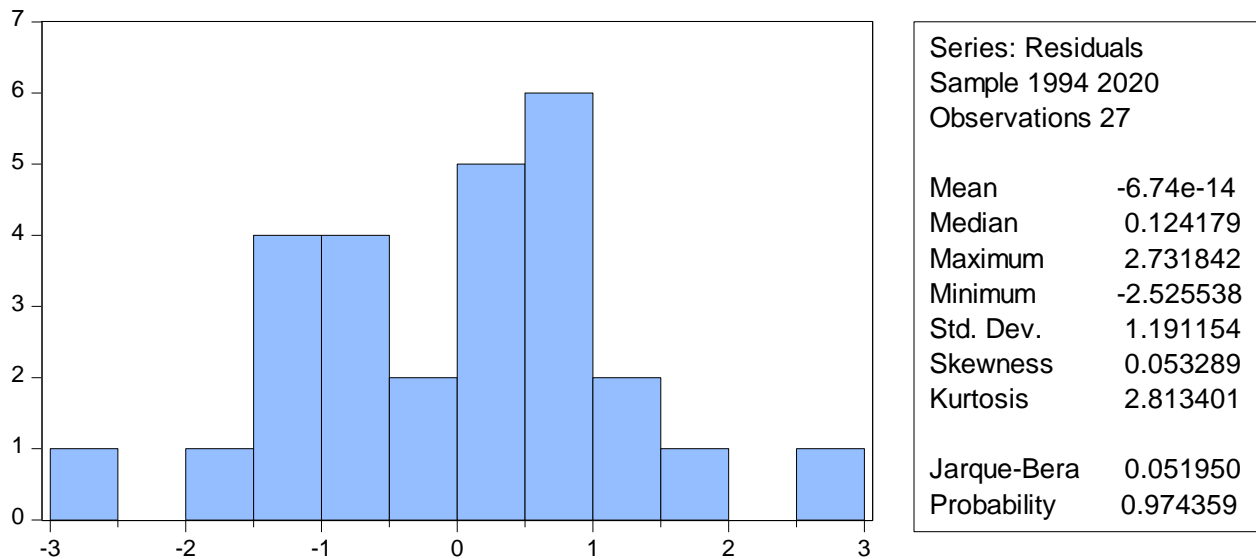
level shows that there is no significancy of the independent variables to the dependent variables in the long run since the value is higher than 5% significance level at 8 percent.

4.7 Normality Test

This test is used to enable us to determine whether the residual follow the normal distribution as postulated by classical OLS assumption. This is tested using the jarque – Bera test . The hypothesis is formulated as follows:

H_o: $\mu = 0$ (Residual follow normal distribution)

H_1: $\mu \neq 0$ (Residual does not follow a normal distribution)

Series: Residuals	
Sample 1994 2020	
Observations 27	
Mean	-6.74e-14
Median	0.124179
Maximum	2.731842
Minimum	-2.525538
Std. Dev.	1.191154
Skewness	0.053289
Kurtosis	2.813401
Jarque-Bera	0.051950
Probability	0.974359

Source: Researcher's e-view t results 2022

The null hypothesis is not rejected since the jarque- bera probability is 0.052 which is greater (>) 0.05 significance level. Thus, we conclude that the residuals do not follow a normal distribution and that the assumption of a normal distribution is not satisfied.

4.8 Discussion of t Results

The above result indicate the impact of the female population on the economic growth of Nigeria during the studied period from 1990 and 2020. The result, which meant that female school enrollment had a negative impact on the economic development of Nigeria, shows that women's enrollment still falls short of that of men in Nigeria when it comes to enrolling in secondary school. The result also indicated that the female labour force participation rate in Nigeria is still below par, life expectancy at birth for female shows that most females hardly live past the age of 50 years, which positively affects growth. More so, the positive impact of the population rate of females on the economic growth in Nigeria is indicative of the fact that women relative to men in general, do contribute significantly to economic growth.

5.0 Summary

The study examined the impact of the female population on Nigeria's economic growth from 1990 to 2020.The Specific data from the WDI (2020) secondary sources were analyzed econometrically using the ARDL method through E-views (10.0) statistical tool. The study was guided by four (4) research questions and the findings which revealed that Female school enrollment, (female employed in the industry) have a negative and yet insignificant impact on the economic growth of Nigeria. While the life expectancy of female, female (as a % of labour force LFPR) and female (as a % of the total population in Nigeria) all had a positive and yet all the variables had a significant impact on economic growth except the number of females in the labour force which was revealed to not have any impact on economic growth. Hence, the study therefore concludes that the female population does not contribute significantly to the Nigerian economy in general, but other factors like total female labour force is seen to not be significantly related with economic growth in Nigeria.

5.1 Conclusion

The study examined the impact of the female population on Nigeria's economic growth from 1990 to 2020. The Specific data from the WDI (2020) secondary sources were analyzed econometrically using the ARDL method through E-views (10.0) statistical tool. The study was guided by and the findings which revealed that Female school enrollment, (female employed in the industry) have a negative and yet insignificant impact on the economic growth of Nigeria. While the life expectancy of female, female (as a % of labour force LFPR) and female (as a % of the total population in Nigeria) all had a positive and yet all the variables had a significant impact on economic growth except the number of females in the labour force which was revealed to not have any impact on economic growth. Hence, the study therefore concludes that the female population does not contribute significantly to the Nigerian economy in general, but other factors like total female labour force is seen to not be significantly related with economic growth in Nigeria

5.2 Recommendation

i. There is a need for the government to encourage the number of women t going t to school t by providing free education t at t all levels t for all t women.
ii. The t government t needs to make policies that will reduce or stop early child t marriage t to t increase Female school enrolment, especially t at t the tertiary   level.
iii. Employers of labour need to review their employment contracts/regulations to t give t women t more power and t access to positions that they merit.
iv. The t government should provide free the al the care to women especially in the rural areas to increase t their life t expectancy.
v. There is also a need to review the Nigerian laws to allow women to occupy critical leadership and political positions in the country.

To propagate subsequent research in the area of financing small and medium enterprises, it is pertinent that the following areas are looked into: Subsequent research could investigate the impact of the nexus between women's access to leadership and transparency in Nigeria.

Further research can also investigate the impact of gender inclusion on the rate of poverty in Nigeria transparency in Nigeria.

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APPENDIX

YEAR	GDP	FTP	LEXP	FES	FEI	LFPR
1990	11.78	49.69	47.19	39.94	13.73	30.78
1991	0.36	49.69	47.16	40.24	13.87	30.77
1992	4.63	49.68	47.13	40.56	13.74	30.73
1993	-2.04	49.67	47.09	40.80	13.74	30.59
1994	-1.81	49.67	47.05	41.04	13.81	30.42
1995	-0.07	49.66	47.01	41.39	13.70	30.23
1996	4.20	49.64	46.99	41.88	13.54	30.20
1997	2.94	49.63	46.98	42.39	13.42	30.12
1998	2.58	49.62	47.00	43.01	13.19	30.00
1999	0.58	49.60	47.06	43.60	13.02	29.86
2000	5.02	49.59	47.19	44.43	12.67	29.74
2001	5.92	49.57	47.40	45.37	12.49	29.78
2002	15.33	49.55	47.69	46.76	12.06	29.85
2003	7.35	49.54	48.07	47.66	11.87	29.87
2004	9.25	49.52	48.52	48.63	11.44	29.88
2005	6.44	49.50	49.03	49.74	11.48	29.88
2006	6.06	49.49	49.57	50.89	11.46	29.98
2007	6.59	49.47	50.12	52.06	11.44	30.04
2008	6.76	49.46	50.66	53.25	11.39	30.09
2009	8.04	49.44	51.17	54.52	11.28	30.13
2010	8.01	49.43	51.66	55.79	11.04	30.17
2011	5.31	49.41	52.12	57.04	10.85	30.25
2012	4.23	49.40	52.58	58.23	11.61	25.93
2013	6.67	49.39	53.04	59.43	12.37	21.98
2014	6.31	49.37	53.51	60.27	12.48	23.30
2015	2.65	49.36	53.97	60.99	12.54	24.68
2016	-1.62	49.35	54.42	61.67	12.72	26.10
2017	0.81	49.34	54.84	62.35	12.81	27.59
2018	1.94	49.34	55.24	62.95	12.81	29.12
2019	2.21	49.33	55.62	63.57	12.87	30.70
2020	-1.79	49.32	55.97	63.26	12.84	28.54

WDI (2020)