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EMPIRICAL ANALYSIS ON THE IMPACT OF GENDER EQUALITY, WOMEN EMPOWERMENT AND ECONOMIC DEVELOPMENT IN NIGERIA

[1]Hafsat Tijjani Mato and [2]Major Auwal Abubakar Muhammad Ph.D
[1]Yobe State University, Damaturu
[2]Department of Economics, Nigerian Army University Biu Borno State Nigeria

Abstract
Gender equality and women empowerment has been recognized as critical tool to sound achievement of national development goals. This paper analyzed the impact of gender equality both in education and employment on economic development of Nigeria. The research study was built on Human Capital theory and classical Modernization perspective. Time series data for the period of 22years was employed ranging from 2000-2021. The data were sourced from World Bank Development Indicators (WDI), Central Bank of Nigeria and National Bureau of Statistics. The secondary data obtained Centre mainly on variables such as real gross domestic product, capital formation, female literacy rate, male literacy rate, female labor force participation and male labor force participation. The study employed multiple linear regression estimation method. Findings revealed that education and female labor force participation rate positively and significantly correlates with economic development while Female education and employment significantly effects economic development in Nigeria. The study therefore recommends that policy makers should encourage the participation of female education and the working force in order enhance productivity and achieve sound economic growth and development in Nigeria.

Keywords: Gender Equality, Education, Labor Force Participation, economic Development

Introduction

Achieving gender equality and women's empowerment has been widely recognized as an important goal for international development and a key to achieving economic and sustainable development of a nation. The United Nations Sustainable Development describes gender equality as not only a fundamental human right, but a necessary foundation for peaceful, prosperous and sustainable world (United Nations, 2018). There is a strong assertion that greater gender equality can enhance economic productivity, improves development outcomes for the next generation and makes institutions and policies more representatives (World Bank, 2011). Women make up about 50% of Nigeria's population and hence half of its potential (UN Women, 2019). Considering the essential values of gender equality, women are now seen as crucial to Nigeria's transformative agenda, without which it will be difficult to achieve any sustainable development and growth. Moreover, investing in women and girls does not only create a positive development cycle, but it has been shown that a country that fails to empower half of its population will suffer from lower productivity, slower economic growth, and weaker development outcomes (Hill and King 1995, Dollar and Gatti 1999, Knowles, Lorgelly, and Owen 2002, Abu-Ghaida and Klasen 2004, Klasen and Lamanna 2009). Therefore, the importance of education and employment in Nigeria cannot be over emphasized, the dual play critical role in promoting economic development through increasing human capital level of the country and as well as boosting the quality of the labour force.

Gender equality implies a society in which women and men enjoy the same opportunities, outcomes, rights and

obligations in all spheres of life. Equality between both men and women exists when both sexes are able to share equally in the distribution of power, influence, have equal opportunities for financial independence through work, and enjoy equal access to education and the opportunity to develop personal ambitions. Promoters of the SDGs particularly that of gender equality consider that giving adequate access to women and girls in terms of education, healthcare, quality job, and involvement in political and economic decision making processes will foster self-sufficient economies and be of great advantage to the societies. A total of 143 countries have assured equal rights for both men and women in their states' constitutions as of 2015, a step believed to be in the right direction. For example, Nigeria is a signatory of the UN General Assembly's Universal Declaration of Human Rights of 1948, the convention on the Elimination of all forms of Discrimination against Women (CEDAW) IN 1979, the Beijing Platform of Action in 1995, the Millennium Development Goals (MDGs) and the Sustainable Development Goals (SDGs).

Problem Statement

Despite the global campaign and the various efforts that were carried on by the Nigerian government and the different stakeholders to reduce gender disparity gap and actualize women empowerment, it is evident that some levels of disparities still remains especially in the areas of education, labor market participation /employment, income opportunities and development process. Globally, women have less access to education and continue to have fewer opportunities for economic participation than men. On the issue of employment **w**omen in Nigeria are less likely to be active in the labour market. They are more likely to be in lower earning opportunities like farming and informal jobs and tend to earn less for a given level of education and experience than men of the same level. Between 60-79% of Nigeria's rural labour force is female (Mayah, Mariotti, Mere, & Odo, 2017). Some cultural practices such as early marriage, family formation, and child labour, among others play a critical role in women's access to paid jobs and hence fuel their diminished economic status. As of 2017 out of a total labour force population of 80 million, about 22 million graduates (primary, secondary and tertiary) are unemployed (NBS, 2017). Furthermore, women in some work places earn less than men for equal work.

Nigeria has performed poorly in terms of gender equality. In 2018 Nigeria ranked 149 in 2013, moving to 133 in 2018 among 149 countries in the Global Gender Gap Index (World Data Atlas, 2017) and 128 out of 153 (World Economic Forum 2020) thereby falling much behind such African countries like Rwanda, South Africa, Uganda, Kenya, Ghana, Tanzania, Mozambique, Zambia and Zimbabwe among others. Thus, the situation of women in Nigeria is still a major source of concern especially in the areas of education and labor market participation.

Research Objectives

The fundamental objective of the study is to ascertain the impact of gender equality and women empowerment on economic development in Nigeria from 2000 to 2021. Specifically, the study Ascertain the impact of female education and employment (labour force participation) on economic development.

Research Hypothesis

H_0: The impact of female education and employment (labour force participation) on economic development is not statistically significant.

H_1: The impact of female education and employment on economic development is statistically significant.

Literature Review and Theoretical Framework

Theoretical Framework

One of the theories that link gender equality, educational attainment and economic development is "neoclassical feminist theories" and the "human capital theory". The neoclassical feminist theory posits that the level of educational attainment of women significantly determines the extent of their efficient and effective participation in the labour market. While the human capital theory implies that education and training imparts the needed skills and knowledge of workers by increasing workers' productivity and growth in the economy Becker (1975), According to Becker (1964) investment in human capital (education and training) affects the employment and income pattern of and the distribution of an economy which determines the level of a country's development. The main point here is to test if all levels of education for women impacts (positive or negative) on economic development. Moreover, the theoretical literature suggests that gender inequality reduces the average amount of human capital in society by artificially restricting the pool of talents from which to draw for education thereby excluding highly qualified girls. Dollar and Gatti (1999).

Literature Review

Gender inequality in education is prevalent in almost all developing countries and among the poor. There exist a considerable amount of literature that studied the link between gender equality in education, employment and economic growth and development. For instance, Hill and King (1995) examine the impact of gender differences in education on economic growth by estimating a production function. The study discovered that low female to male enrolment ratio is linked with a lower level of GDP per capita. In general, they found that countries with more significant educational inequality will have 25% lower output than a country with smaller educational gap.

Klasen (1999) investigates the extent to which gender inequality in education and employment reduces economic growth and development. The analysis shows that gender inequality in education has a direct effect on economic growth through lowering the quality of human capital and indirectly through its impact on investment and population growth by compromising the well-being of the countries under study.

Mammen and Paxson (2000) used a cross country data set and micro data from India and Thailand to examine how women's work status changes with economic development. Findings revealed several clear patterns; women labor force participation declines and then rises with development. The reason for the initial decline is believe to be due to shift in production from household, family farm or small business to wider market with strong income effect. Findings further revealed that education levels of women and their spouses are important determinants of labor force participation, which was found to be a U-shape relationship with the level of development.

Dauda (2012) examined whether female education promotes economic performance in Nigeria employing co-integration and error correction technique from 1975 – 2008. Results suggest that male education has a significant and positive relationship/impact on the Nigerian

economy, while female education does not. Accordingly, the study posits that if the country wants to achieve sustainable growth which would engender structural transformation of the Nigerian economy. Baba and Anumaka (2019) conducted a study on the significance of education on the socio economic development in Yobe State, Nigeria. The study revealed that women education has a very significant and positive relationship with their household income level, standard of living and economic development

Ikechuku, Azu and Benedict (2014) conducted a study on Social Welfare Analysis of Gender Inequality in human capital development (education and employment) across rural and urban areas in Nigeria. Using data from Nigerian survey by NBS on labour force participation by gender, gender schooling ratio, gender unemployment by educational level as well as sector, gender population growth rate and active economic participation by gender. The study revealed that female unemployment by educational level is predominant in the urban areas as compared to the rural area. Furthermore, gender inequality is higher in labour force participation than education in Nigeria.

Saad and Assoumou Ella (2019), examined if gender inequality in education affects GDP per capita of the central African Economic and Monetary community (CEMAC) countries. The study revealed that increase of gender equality index at all levels of education increases GDP per capita. Similar to Saad and Assoumou Ella (2019), Agenor et al (2015) posit that the higher the gender equality in education the better the human capital availability for future generation. Using overlapping generation models of endogenous growth, the authors showed that higher gender equality in education improves human capacities in the next generation. It was further revealed that higher education equality for women leads to a better investment in children.

Ali (2015) examine the relationship between gender inequality in education, employment and labor force participation on economic growth and development of Pakistan using time series data from 1980 to 2009. The author uses the differences in labor force participation rate of females age 15+ (LFPF), labor force participation rate of males(LFPM), Gender parity index, (GPI), and trade openness as the independent variables. The dependent variable is GDP growth. The study concludes that, there is positive relationship between gender equality and economic growth. This is in line with Klasen and Lamma (2009) where the authors reach the same conclusion regarding gender inequality in education and labor force participation using cross country and panel data for the period 1960 to 2000. Findings revealed that gender inequality reduces growth in the countries of study. Furthermore, findings show that gender gaps is the reason behind the growth differences across regions.

Licumba, Dzator and Zhang, (2015) carried out a study on gender equality in education and economic growth in selected South African countries. The authors examined the impact of gender equality in education on economic growth on a panel data of southern African countries between 1970 and 2010. Results found the effects gender equality in education positive, significant and robust to changes in specification.

Egbulonu and Eleonu (2018) investigate the relationship between gender inequality and economic growth in Nigerian from 1990 to 2016 using Ordinary Least Square (OLS) regression model technique. The study also evaluated the determinant of female

contribution to economic growth in Nigeria as well as the relationship between female participation and economic growth in Nigeria. The study discovered that the male school enrolment and female employment rate have a significant effect on Nigerian economic growth. It also found that the Nigerian female employment level has increased. Based on the findings, the authors concluded that there is need to create more employment opportunities as well as the formulation of policies that will boost education standard drastically reduce barriers that create room for inequality in gender access to education and employment.

Ngwoke (2020) examine the implication of gender inequality in education for socioeconomic development in Nigeria. The author identified education as a catalyst for socio economic growth and a strong deriver of poverty reduction through promotion of human capital development among others. The study found out that gender inequality persist in Nigeria and the disparity in gender exposes women to marginalization, exploitation, domestic violence, and excludes them from participating in the workforce.

Essen and Seren (2021), examined the impact of gender inequality in education and employment on economic performance of in Turkey using Johanson cointergration tests and ordinary least squares estimation method. The study found a long term relationship between inequality in education and economic performance. It also found that better equality in both gender education and employment have a strong and significant impact on real gross domestic product (GDP) per capita in the long run.

Methodology

Data Sources

This research adopted the ex post facto research design. The use of e*x post facto* research design is justified on the ground that the events or variables that are observed have taken place before the research commenced. The study used secondary time series annual data covering 22 years period from 2000 to 2021 obtained from World Development Indicators (World Bank), Central Bank of Nigeria (CBN) and National Bureau of Statistics (NBS). The choice of years is premised on the need to cover the pre -SDGs era and the SDGs era.

Model Specification

The study utilized multiple linear regression method to ascertain the impact of gender equality and women empowerment on economic development in Nigeria. The functional relationship among the variables is presented as follows:

RGDP =f (CF, FLR, FLFPR, MLR, DV) (1)

Where

RGDP= Real Gross Domestic Product

CF= Capital Formation

FLR= Female Literacy Rate

FLFPR= Female Labor Force Participation Rate

MLR= Male Literacy Rate

DV= Dummy Variable

For the purpose of estimation, this functional relationship is transformed into an econometric model as;

$RGDP_i = \beta_0 + \beta_1 CF_{1i} + \beta_2 FLR_{2i} + \beta_3 FLFPR_{3i} + \beta_4 MLR_{4i} + \beta_5 DV_{5i} + \epsilon_i$. (2)

Data Presentation and Analysis

Preliminary Test

The preliminary test to evaluate the nature of the distribution of the data set used in this study consists of descriptive and graphical trend analysis and unit root test. These results are presented and discussed below:

Unit Root Test

Estimating equation 2 using OLS may lead to spurious results if some of the independent and dependent variables are non-stationary. Thus, to ascertain the stationarity of the variables, a unit root test was conducted using Augmented Dickey-Fuller (ADF) technique at Level and also at first difference.

Table 1a: Augmented Dickey-Fuller Test (Level)

Null Hypothesis: Series has a Unit Root
Series: CF, FLFPR, FLR, MLR, RGDP
Exogenous Variables: Individual effects
Cross-sections included: 5
Technique: Augmented Dickey-Fuller Test (Level)

Method	Statistic	Prob.
ADF – Fisher Chi-square	10.9470	0.8127
ADF – Choi Z-stat.	1.56154	0.9408

Source: Author, 2022

Table 1a displayed the results of unit root test. The results show that the series has a unit root implying that it is non-stationary at level. This is seen in the ADF (Fisher Chi-square) of 10.95 with a probability value of 0.8127 which is greater than 0.05. Thus, the null hypothesis that the series has a unit root is accepted.

Table 1b: Augmented Dickey-Fuller Test (First Difference)

Method	Statistic	Prob.
ADF – Fisher Chi-square	74.2957	0.0000
ADF – Choi Z-stat.	-4.32645	0.0000

Source: Author, 2022

The ADF result displayed in Table 1b depict that the series is stationary after first difference at 5% level of significance. Given an ADF (Fisher Chi-square) value of 74.2957 and a p-value equal to 0.0000 < 0.05, the null hypothesis that the series has a unit root is rejected.

Table 2: Regression Result
Co-efficients[a]

Model	Variables	B	Standard error	Beta Coefficient	t-value	Sig.
1	(Constant)	17.392	1.968		8.840	0.000
	MLR	-1.637	0.457	-0.645	-3.582	0.002
2	(Constant)	37.238	5.700	-	6.533	0.000*
	MLR	-5.313	0.978	-2.095	-5.436	0.000*
	CF	0.285	0.154	0.288	1.858	0.083
	FLFPR	-2.626	0.981	-0.652	-2.677	0.017*
	FLR	1.384	0.480	1.090	2.882	0.011*

a. Dependent Variable: Real Gross Domestic Product (RGDP)
* Significance level: 5 percent (0.05)

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F	Sig.	Durbin-Watson
1	0.645[a]	0.416	0.384	0.1871	0.416	F(1, 18) 12.834	0.002	1.524
2	0.880[b]	0.774	0.714	0.1275	0.358	F(3, 15) 7.911	0.002	

a. Predictors: (Constant), MLR
b. Predictors: (Constant), MLR, CF, FLFPR, FLR
c. Dependent Variable: RGDP

Table 2 illustrates the results of multiple linear regression estimate of the impact of female education and employment on economic development in a model of five variables where the response variable RGDP is regressed on explanatory variables namely CF, FLFPR and FLR in addition to the control variable of MLR. FLFPR positively relates with RGDP but the negative sign as shown in the table is reflective of the fact that FLFPR decreases with economic development rise at the initial stage before it starts rising. Looking at the significant value, it is clear that FLFPR considerably predict changes in Nigeria's economic development.

FLR positively relates and significantly impact on RGDP as seen by its coefficient of parameter estimate of 1.384 (SE = 0.480), beta coefficient of 1.090 and a t-value of 2.882. FLR has a significant effect on RGDP because its p-value of 0.011 is less than 0.05.

MLR was included in the model to control from the contribution of male human capital to capital formation/GDP. The variable is significant at the 5 percent level as seen in the p-value of 0.000 and t-statistics of -5.436 in model 2. R-squared which is the coefficient of determination statistically determines the proportion of variance in the dependent variable (RGDP) that is explained by the independent variable.

The goodness of fit of the model is very high at 0.774 which indicates that at least the independent variable predicts about 71 percent of the model while the remaining 29% is accounted for by other variables outside the scope of this study.

Overall, the explanatory variables of CF, FLFPR and FLR significantly predicted RGDP as demonstrated by F (4, 15) = 12.837, p-value = 0.000 < 0.05, indicating that the independent variables play a significant role in shaping RGDP. Based on the foregoing, we hereby reject the null hypotheses and accept the alternative which states that the impact of female education and employment on economic development is statistically significant. Female education and employment positively impacts Nigeria's economic development. This result is consistent with the findings of Dollar and Gatti 91999), Knowles et al (2002), Abu-Ghaida and Klasen 2004, Klasen and Lamanna 2009).Yumusak Billen and Ates (2013), Ali (2015).

Conclusion and Policy Recommendations

This study has analyzed the effect of gender equality both in education and employment on economic development of Nigeria. Looking at the extent to which gender equality and women empowerment impacts on economic development, the research included some key socio and economic

variables such as female education (proxied by female literacy rate) and female employment (gauged by female labour force participation rate) Likewise, the variable of capital formation was included in the model because it is in line with the theoretical framework of human capital theory of the study which implies that training and education imparts the needed skills and knowledge of workers by increasing workers' productivity and increasing growth in the economy. The impact of education on economic development may not have been adequately captured without the inclusion of capital formation in the model since investment in human capital (education) affect the employment and income patter and distribution of an economy and this determines the level of a country's development. Findings from the study revealed that education and female labor force participation rate positively and significantly correlates with economic development. Furthermore, findings from this study suggest that Female education and employment positively impacts Nigeria's economic development. In addition, the research concludes that female labour force participation rate can be reliably used to predict Nigeria's economic development in terms of real GDP. The study therefore recommends that policy makers should encourage the participation of female education and the working force in order enhance productivity and achieve sound economic growth and development in Nigeria.

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