Gender Inequality and Economic Growth in Nigeria (1990–2016)

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Abstract

This study focused on the relationship between gender inequality and economic growth in Nigeria from 1990 to 2016. It also sought to investigate the determinants of female contribution to economic growth in Nigeria as well as to determine the relationship between female participation and economic growth. Secondary data was used to back up our Econometric analyses of how Gender Inequality affects Economic growth in Nigeria. The major findings were that only Male School Enrolment and Female Employment Rate have significant impact on the economic growth of Nigeria. Based on the findings, we recommended that the issue of gender equality should be taken seriously if the country wants to achieve sustainable growth which would engender structural transformation of the Nigerian economy; the government needs to invest in targeted policies to boost education standard, create employment opportunities, and more importantly reduce the barriers that cause inequality in gender access to education and employment, so as to generate appropriate productivity that is necessary to attain the desired growth in Nigeria.

Key words: School Enrolment, Economic growth, Gender Inequality, Human capital

1. Introduction/Background of the Study

Inequality between women and men has been clearly identified by several research works as one of the causes blocking development over the last two decades. In a developing economy like Nigeria it is often difficult to establish evidence-based causal links between impact of gender inequality on a country’s growth and development because of lack of available sex-disaggregated data. And because of limited data, we may not capture the complexity of gender inequality in different contexts (such as looking at the gender-specific effect of public investment cuts, for example). One way to measure gender inequality is to look at the differences for women and men in areas such as education, health, decision making and access to economic opportunities such as employment etc.

According to UNCSW (1994), Women are more than fifty percent of the world's population. They perform two-third of the world's work, yet receive one-tenth of the world's income and own one-hundredth of the world's property. They represent a staggering seventy percent of the world's one billion poorest people. This is a stark development reality for our world.

Nigeria has the highest population of any African country, with a population of over 186 million; Nigeria is ranked the world's seventh most populated country (UNDP, 2005). Of this magnitude, forty-nine percent are females. Comparatively, thirty-eight percent of women in Nigeria lack formal education as against twenty-five for men and only four percent of women have higher education against the seven percent of their male counterpart. Nigeria ranks 118 of 134 countries in the Gender Equality Index (GEI) (Randriamaro, 2012). Commenting on the fore, it is apparent that no appreciable development can be made either at the local, national or international platform without recognizing girls and women as equal players in the game of life whilst empowering, up-skilling and investing in them for a better world.

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Reviewing the UK Department for International Development (DFID) 2012 Gender Report in Nigeria, Nigeria’s 80.2 million women and girls has significantly worse life chances than men and their sisters in comparable societies. This reveals the neglect of the Nigerian people and government in tackling the issue of gender inequality despite calls from various quarters. It also brings to bare our frail understanding of preparing the girl child for tomorrow’s motherhood, family and societal challenges. The report which succinctly stated that “Women are Nigeria’s hidden resource”, exposed that over 1.5 million Nigeria children aged 6-14 (8.1%) are currently not in school, a situation which has effortlessly earned Nigeria the world’s largest out of school children country; an unfortunate achievement of a robust nation. “In eight Northern States, over 80% of women are unable to read (compared with 54% for men); In Jigawa State, 94% of women (42% of men) are illiterate”. Apparently, we have failed to realize that just a few investments have as large a payoff as girls’ education.

Among the problems that necessitated this research include the low level of government expenditure and investment in human capital development (especially the female gender), as also pointed out by Uzi (2009), the less than expected access to employment opportunities for women, etc. which has grossly constrained women from contributing their quota to economic growth in Nigeria. This research is limited to Nigeria and the Nigerian economy for the period 1990 – 2016. Questions that arise from this study are: What are those constraining and discriminating factors against women that still continue to perpetuate gender inequalities in Nigeria? To what extent has the rate of the human capital development available to women (compared to men) through education resulted to increase in the levels of economic growth in Nigeria? What impact has the level of employment of women (in comparison to that of men) in Nigeria made on the economic growth of Nigeria? To what extent has government expenditure and investment (which are gender specific) boosted productivity and hence economic growth in Nigeria? These pertinent questions served as a useful guide in the course of this paper.

2. Literature Review
2.1 Gender Inequality:

The term "gender" refers to economic, social and cultural attributes and opportunities associated with being male or female (UN-Habitat (2003). In almost all societies, women and men differ in their activities and undertakings, regarding access to and control over resources, and participating in decision-making. Ikechukwu (2013) identified gender as a social institution, cultural construct and power tool. There is a danger to confuse "gender" with "women". Soetan (2003) posited that the concept of gender is not limited to the male or female species, but goes further to assess the relations between them as are constantly being renegotiated in the context of changing political, economic, social and cultural environments at the local, national and supra national levels.

Gender analysis entails having knowledge of both women and men's roles and responsibilities, as it is the comparative analysis between these that will highlight the gender inequalities of any society. Gender inequality does not imply that all women are worse off than all men. Rather, gender (being male or female) is an important social division characterized by inequality. Being a woman or a man influences people’s perspectives and their social expectations.

Gender equality according to the Canada –Ukraine Gender Fund (2004) means that women and men enjoy the same status and have equal opportunities for realizing their full human rights and potential to contribute to national, political, economic, social, and cultural development, and to benefit from the results. The concept of gender equality acknowledges that different treatment of women and men sometimes required to achieve sameness of results, because of different life conditions or to compensate for past discrimination.

UN-Habitat (2003) states that gender analysis must take into consideration and address differentials in control over and access to land and other resources, inequalities in gender participation and roles in decision-making forums as well as inequalities in representation concerning urban planning and development. According to Adeniran (2006), sustainability can only be achieved when the gender manipulations and ecosystem relationships within the local environment are identified. The collection of gender-differentiated information on the social, environmental, technical and economic aspects of development will render planning for development more efficient and egalitarian, two points which are essential for sustainability. Among the benefits which derive from integrating gender issues include enhanced social and economic impact of development and more efficient use of resources.
The concept of equality emphasized that both men and women enjoy equal opportunities. Gender equity is a process or strategy for achieving gender equality. The United Nations regards gender equality as a human right; empowering women is an indispensable tool for advancing development and reducing poverty. Gender equality does not imply that women and men are the same, but that they have equal value and should be accorded equal treatment (Igbuzor, 2010)

2.2 Areas of Gender Inequality in Nigeria

According to Okpe (2015), Gender Inequality can be seen in the following areas:

(1) Labor and Employment – Women do not generally earn the same wages as men for the same work especially casual or unorganized labour which is where most women are employed. Those in public service are discriminated against in the area of maternity, sexual harassment and employment practices.

(2) Access to Finances and Credit – Most banks and financial homes do not give loans to women and most times women have to be guaranteed by men before they can access credit for economic activities. This results in more women becoming poorer, even those who are able to do some business for their economic enhancement.

(3) Harmful Traditional Practices – Traditional practices like female genital mutilation, widowhood practices, male preference, and domestic violence lend weight to discrimination against women. The heavy workload of women within the household and lack of house decision making powers contribute to deprive women of their rights and life. Information on family planning where they exist sometimes produces harmful side effects. Male preference leads to abuse and low self-esteem for the female child even from birth and thus she does not develop her full potentials to enable her contribute effectively to the nation.

(4) Violence against Women – Women are still victims of rape, sexual assault/harassment and battery, widowhood practices, forced labor, trafficking, incest, and other forms of gender assaults and abuses. Domestic violence is still regarded as a private affair requiring no legal or official intervention.

(5) Access to Justice – Women are politically, economically, socially, culturally, educationally, and legally disadvantaged. They cannot take advantage of facilities and opportunities available to them to achieve and enforce their human rights. They are mostly ignorant of their fundamental rights and freedoms. In many police stations, women are still not allowed to take people on bail (Okpe, 2015).

2.3 Dangers of Gender Inequality

Some of the consequences of gender inequality related to industrial development can be clustered into economic, environmental and social focus areas, and include:

Economic:

- Low levels of women participating in the manufacturing sector. Women still account for only 24% of jobs in manufacturing and are more likely than men to access low-paid, low productivity and vulnerable jobs with no basic rights, social protection nor voice (UNDESA 2010).
- Women produce between 60 and 80% of food in most developing countries and are responsible for half of the world’s food production (UNIDO 2012).
- According to UNDESA statistics, women account for two thirds of the world’s 774 million illiterate adults, and just over one-quarter of scientific researchers (UNDESA, 2010). There is still a significant gender gap between boys and girls as we move from primary to secondary and tertiary education. The economic repercussions of these inequalities are far reaching, given the clear evidence that educated women invest more in their children and contribute to the welfare of the next generation.

2.3.1 Environmental:

- Low levels of access to efficient resources, technologies and operating practices exclude women, girls, men and boys from fully participating in economic growth and sustainable development.
- Lack of energy access and low energy efficiency is one of the most pressing of all the global challenges and a major factor in sustaining gender inequality. One person in five lacks access to modern energy services and twice that number, three billion people, rely on wood, coal, charcoal or animal waste for cooking and heating. In today’s economy, this is inequitable and a major barrier to eradicating poverty and gender equality. (UNIDO, 2012).
• Rapid resource depletion and the depletion of ecosystems through current systems of production and consumption impinge on women’s livelihoods and economic opportunities.
• Women are especially vulnerable to the adverse impacts of climate change and extreme weather affecting crops, rural livelihoods as they traditionally tend to stay behind whilst men find work in the cities.

2.3.2 Social:
• Women bear the brunt of unpaid work – primarily domestic and care work. Women have different needs and face greater constraints than men when running a business. Particularly, in developing countries, the limited provision of welfare services, such as lack of childcare and healthcare infrastructures, increases the time women need to spend in the care economy.
• The migration of men from rural to urban areas leaves unbalanced family structures behind, with women, children and elderly expecting remittances, thus many female head-households and rural families need to diversify their sources of income and employment in view of increasingly small parcels of land, low agricultural productivity, volatile weather conditions and soil erosion.
• Complex demographic shifts such as in the case of China, where a shift to an older population profile, potentially impacts growth in the productive sectors and places additional demands on women who traditionally care for elders.
• Urbanization – and more specifically – rapid urbanization has resulted in sprawling urban slums, particularly in low-income countries in Asia, Africa and Latin America. Women living in urban areas are more likely to suffer from urban poverty, including: violence, unemployment, poor sanitation, and inadequate access to clean water.
• Migration can negatively impact upon women and girls lives through: isolation from communities and networks; risk of economic exploitation; political insecurity; violence and abuse.

3. Theoretical Framework:
3.1 Esteve-Volart’s Model
This model as stated in Stacey (1993) and further highlighted in Dankelman (2003) studied the effects of gender inequality under both total (no women as managers) and partial (some women as managers) sex discrimination by dividing the population into workers and managers, with different education requirements for both groups. She found out that growth rates are hurt under partial discrimination, but not under total discrimination.

In addition, her model predicts that economies with either type of sex discrimination will experience a lower per capita GDP. Since no realistic economy exhibits total sex discrimination, one can expect that countries that discriminate more against women should have lower growth rates and lower per capita GDP. Even though the discrimination studied in her model is discrimination in the workforce, Esteve-Volart points out that because of the different education requirements for workers and managers, this sort of discrimination can be expected to turn up in education differentials, making differences between men’s and women’s education an important factor to study.

4. Empirical Review
Ikechukwu (2013) carried out a study on Social Welfare Analysis of Gender Inequality in Education and Employment. The study analyzed the social welfare effect of gender inequality in human capital development (education and employment) across rural and urban Nigeria. Using Nigeria data set on labour force survey by NBS, gender unemployment by educational level and sector, gender schooling ratio, gender population growth rate and economic active participation by gender. The study found that female unemployment by educational level is predominant in the urban sectors compared to the rural sectors.

Risikat (2012) carried out a research on Female Education and Economic Performance in Nigeria using the co-integration and error correction techniques for the period 1975-2008. He found that female education does not have any significant impact on real GDP in Nigeria. They emphasized on the need for adequate investment in female education. Anochie et al (2015) holds that the empowerment of women through such things as the promotion of women’s rights and an increase in the access of women to resources and education proves to be key to the advancement of economic development.
This was further proved by Olanrewaju and Okoko (2015) in their research on Gender Inequality in Agriculture. They found that gender inequality is high in Agricultural sector and thus, hamper economic growth in Nigeria. They suggested that empowerment of women with needed resources will help to improve the economy. Adeoti and Awoyemi (2006) examined the effect that gender inequality in employment has on productive efficiency for rural cassava farms in southwest Nigeria. Their findings indicate that increased gender inequality decreases productive efficiency.

5. Methodology

This research work adopted the ex-post facto research design by collecting data from secondary sources which include The World Economic Outlook, United Nations Educational Scientific and Cultural Organization (UNESCO) Institute for Statistics, International Labour Organization (ILO), World Bank National Account Data, and OECD National Accounts Data Files. These data are gathered for a period of 26 years (1990-2016).

5.1 Model Specification

The model examines the relationship between gender inequality and economic growth of Nigeria. We adopted the Risikat (2012) econometric approach which employs an extended version of the Solow growth model with real GDP being a function of investment to GDP ratio, human capital accumulation (disaggregated by gender), labour force, openness to trade and government spending on community services. We establish a unique model by modifying the above model of Risikat (2012) by using Gross Domestic product as the dependent variable measured as a function of Investment to GDP ratio, Government Expenditure to GDP ratio, Labour Force disaggregated by gender (Male and Female Employment), and Human Capital Development disaggregated by gender (Male and Female Scholl Enrolment).

This statement is written in functional form as;

\[ \text{GDP} = f(\text{INVT}, \text{GEXP}, \text{MEMP}, \text{FEMP}, \text{MENR}, \text{FENR}) \] …(1)

The Ordinary Least Square regression, assuming a linear relationship amongst the variables, can be written as:

\[ \text{GDP} = \alpha_0 + \alpha_1 \text{INVT}_t + \alpha_2 \text{GEXP}_t + \alpha_3 \text{MEMP}_t + \alpha_4 \text{FEMP}_t + \alpha_5 \text{MENR}_t + \alpha_6 \text{FENR}_t + \mu_t \] …(2)

Where:

\[ \begin{align*}
\text{GDP} & = \text{Gross Domestic Product} \\
\text{INVT} & = \text{Investment (% of GDP)} \\
\text{GEXP} & = \text{Government expenditure (% of GDP)} \\
\text{MEMP} & = \text{Labour force participation rate, male (% ages 15 and older)} \\
\text{FEMP} & = \text{Labour force participation rate, female (% ages 15 and older)} \\
\text{MENR} & = \text{School Enrollment, secondary, male (% gross)} \\
\text{FENR} & = \text{School Enrollment, secondary, female (% gross)} \\
\mu & = \text{Error Term} \\
\alpha_i, i=1,2,\ldots6 & = \text{Unknown parameters to be estimated}
\end{align*} \]

Since the data are time series, we first test for the Stationary of the series using the Augmented Dickey Fuller Unit Root test; this is followed by the test for long run relationship amongst the variables using the Bounds test in the case of mixed order of integration of the variables. The variables are tested for individual and joint significance using the t-statistic and F-statistic tests which follows the Ordinary Least Square Regression model technique. The analysis concludes with the test for Autocorrelation of the error terms of the model and Multicollinearity test.

5.2 Analysis and Interpretation of Results
Unit Root Test:

<table>
<thead>
<tr>
<th>Variables</th>
<th>ADF test statistic (Level)</th>
<th>ADF test statistic (1st difference)</th>
<th>Order of Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>-4.357019</td>
<td>-8.006075</td>
<td>I(0)</td>
</tr>
<tr>
<td>INV</td>
<td>-3.157408</td>
<td>-5.855226</td>
<td>I(0)</td>
</tr>
<tr>
<td>GEXP</td>
<td>-4.630918</td>
<td>-7.421234</td>
<td>I(0)</td>
</tr>
<tr>
<td>MEMP</td>
<td>-1.394997</td>
<td>-5.210153</td>
<td>I(1)</td>
</tr>
<tr>
<td>FEMP</td>
<td>-0.524387</td>
<td>-5.538763</td>
<td>I(1)</td>
</tr>
<tr>
<td>MENR</td>
<td>0.423382</td>
<td>-3.357615</td>
<td>I(1)</td>
</tr>
<tr>
<td>FENR</td>
<td>0.120324</td>
<td>-4.248216</td>
<td>I(1)</td>
</tr>
</tbody>
</table>

5% Critical Value = -2.986

Source: Eviews9 Output

From the analysis above, it is seen that GDP, Investment (INV), and Government Expenditure (GEXP) are stationary at level i.e. integrated of order I(0); while Male Employment Rate (MEMP), Female Employment Rate (FEMP), Male School Enrolment rate (MENR) and Female School enrolment (FENR) are stationary at first difference i.e. I(1) order of integration. This gives a mixed order of integration hence we test for long run relationship using the Bounds test for cointegration.

5.3 Bounds Test:

The bounds test is used to confirm the long run relationship that exists amongst the variables. This test is used in place of the Johansen cointegration test given the mixed order of integration of the variables at I(0) and I(1). The test is summarized below:

ARDL Bounds Test
Sample: 1994 2016
Null Hypothesis: No long-run relationships exist

<table>
<thead>
<tr>
<th>Test Statistic</th>
<th>Value</th>
<th>k</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
<td>4.995451</td>
<td>3</td>
</tr>
</tbody>
</table>

Critical Value Bounds

<table>
<thead>
<tr>
<th>Significance</th>
<th>I0 Bound</th>
<th>I1 Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>2.72</td>
<td>3.77</td>
</tr>
<tr>
<td>5%</td>
<td>3.23</td>
<td>4.35</td>
</tr>
<tr>
<td>2.5%</td>
<td>3.69</td>
<td>4.89</td>
</tr>
<tr>
<td>1%</td>
<td>4.29</td>
<td>5.61</td>
</tr>
</tbody>
</table>

Source: Extracted from Eviews9 Output

The Bounds test above shows that the F-statistic value of 4.99 is greater than the Critical value of the I(0) and I(1) bounds at 5% level, therefore, going by the decision rule, we reject the null hypothesis stated above and conclude that There exists a long run relationship amongst the variables. Having confirmed the long run relationship existing between the gender indices and economic growth; we go ahead to estimate the long run coefficients of the indices in order to know the extent to which each of the indices affects economic growth in Nigeria.
5.4 Long Run Model Estimation

Included observations: 27

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>184.8247</td>
<td>78.29200</td>
<td>2.360710</td>
<td>0.0285</td>
</tr>
<tr>
<td>INVT</td>
<td>-0.620054</td>
<td>0.574808</td>
<td>-1.078715</td>
<td>0.2936</td>
</tr>
<tr>
<td>GEXP</td>
<td>-0.009922</td>
<td>0.181470</td>
<td>-0.054676</td>
<td>0.9569</td>
</tr>
<tr>
<td>MEMP</td>
<td>-0.823711</td>
<td>0.507242</td>
<td>-1.623903</td>
<td>0.1201</td>
</tr>
<tr>
<td>FEMP</td>
<td>3.150110</td>
<td>1.320473</td>
<td>2.385592</td>
<td>0.0271</td>
</tr>
<tr>
<td>MENR</td>
<td>0.346686</td>
<td>0.117015</td>
<td>2.962748</td>
<td>0.0367</td>
</tr>
<tr>
<td>FENR</td>
<td>0.417961</td>
<td>1.257822</td>
<td>0.332289</td>
<td>0.7431</td>
</tr>
</tbody>
</table>

R-squared 0.700213  Mean dependent var 5.580556
Adjusted R-squared 0.690277  S.D. dependent var 6.453982
S.E. of regression 6.155771  Durbin Watson stat. 2.160859

Source: Extracted from Eviews9 Output

The long run coefficients above indicate that Investment (INVT), Government Expenditure and Male Employment Rate (MEMP) all have negative and insignificant relationships with GDP decreasing it by -0.620, -0.0099 and -0.8237 units respectively. The reasons for their insignificance could be attributed to the fact that government expenditure and investment (which in turn enhances human capital development and labour force) is not efficient from an economic standpoint. This may be true because corruption and over-hiring are major problems in many developing nations (Pritchett 1999). Also, Risikat (2012) argued that Corruption, instability, poor policy implementations, high rate of misappropriation and embezzlement of the supposed public fund intended to be channeled towards investment in education, lack of employment opportunities etc., are still prevalent in many developing economies. Thus the resultant effect is low boost in economic growth in the long-run and distortions in the macro-economy as evident in our model estimates.

Conversely, Female Employment Rate (FEMP), Male School Enrolment (MENR) and Female School Enrolment (FENR) have positive relationships with GDP increasing GDP by 3.150, 0.347 and 0.418 units respectively. In terms of individual significance, only Female Employment Rate (FEMP) and Male School Enrolment (MENR) are individually significant at 5% level. The fact that Male School Enrolment has a positive and statistically significant impact on GDP (while Female School Enrolment does not) may be attributed, in part, to the biased nature of child development in many parts of Nigeria which favours the education of the male children at the expense of female children (Akinola, 2009). The above findings are consistent with the works of Risikat (2012) on Female Education and Economic Performance in Nigeria and that of Randriamaro (2012) on The Effect of Gender, Trade and Labour in Africa, among others, and thus, brings to the fore the need for adequate investment in female education and empowerment.

Lastly, the intercept of the model is estimated at 184.82 meaning that GDP increases by 184.82 units holding the variables here constant at zero. The variables show joint impact on GDP with F-statistic value of 7.43. The Durbin Watson statistic of 2.16 indicates the absence of Autocorrelation in our model while the R-squared adjusted proves that about 69% of the variations in GDP are accounted for by the gender indices used in the model. The 69% coefficient of determination represents a very good fit for the model.

6. Conclusion And Recommendations

The right of women and female folks in the socio-economic space of Nigeria on her democratic agenda has been a matter of public debate and, hence attracts serious concerns by individuals, academic, public analysts and the wider international community as a whole. The non-significance of Female School Enrolment in this study negates the collective interests of human fundamental rights and the rights of equality, freedom and personal education of women in the society. Overall, the research has provided strong evidence that females are still disadvantaged in enrolment and schooling access in Nigerian education (Kira 2010; UNESCO, 2010). The model indicates that Males are significantly favored in school enrollment than Females. Much evidence from Nigeria and other developing countries suggests that women’s participation in school is strongly determined by their socio-economic status.
However, findings from this research work points to the fact that Female Employment Rate has significantly risen in recent times which is an appreciable development. In order to sustain this development and further enhance Female School Enrolment in Nigeria, we recommend as follows:

1. Government should reappraise existing development policies and strategies and pay more attention to educational policies that enhance female enrolment rates, participation in educational institutions and literacy to enhance women contribution to growth and economic transformation in Nigeria.
2. More non-governmental organizations (NGOs) should be encouraged to come up with more blue prints that would pressurize the government towards increasing expenditure on girl child education and encouraging Female School enrolment especially in rural areas.
3. The government should come up with women empowerment programmes and trainings that will further expand the percentage of women engaged in public and private employments. These will serve as the needed boost towards enhancing equal participation in economic activities and collectively enhance the growth of the Nigerian economy beyond measures.

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