A Perspective on Women Gender Equality in Nigeria: Level, Differentials and Prediction

ACHA CHIGOZIE KELECHI[*]

Department of Statistics, Micheal Okpara University of Agriculture, Umudike, Abia State, Nigeria
*Corresponding author: specialgozie@yahoo.com

Abstract The major aim of this paper is to ascertain the level, differential, and prediction of gender equality in Nigeria by 2015. Knowledge accumulation and application, especially for women, have become major factors in economic development and are increasingly at the core of a country's competitive advantage in the global economy. Secondary data from Nigeria Demographic and Health Survey (NDHS), Nigeria Demographic and Education Survey (NDES), Sentinel survey and National Population Commission (NPC) data were used. The result showed that over 71 percent of women had no education while 43 percent of men had no education. Furthermore, there is disparity between women and men education according to household economic status as in the poorest households, 40 percent of men are literate compared to 13 percent of women. Also, the population projection from 2009 to 2015 with 2008 as the base year was carried out. The result showed that Nigerian's population by sex is growing exponentially at the rate of 3.04%. This increase will further hamper the realization of the third millennium development goal which is gender equality by 2015.

Keywords: population, demography, survey, education, equality

Cite This Article: ACHA CHIGOZIE KELECHI, "A Perspective on Women Gender Equality in Nigeria: Level, Differentials and Prediction." *American Journal of Applied Mathematics and Statistics*, vol. 3, no. 1 (2015): 12-16. doi: 10.12691/ajams-3-1-3.

1. Introduction

Despite the fact that education is a basic human right and has been recognized as such since the 1948 adoption of the Universal Declaration on Human Rights, obtaining equal educational opportunities for women in Nigeria has been challenging. Education bestows on women a disposition for a lifelong acquisition of knowledge, values, attitudes, competence and skills. The question of gender disparity in education in the African continent has long historical antecedents. Even in the 1960s, when most African states began to gain their political independence, there was considerable gender disparity in education. That is when women enrollment figures were very low throughout the continent. Issues of gender equality in education have been the subject of much debate during the past decades and have become a prominent topic of debate in all countries. In Nigeria, there are large disparities between the education that men and women receive. The interest for this study flows from the fact that many women do not have access to adequate education and this leads to the investigation and prediction of gender equality in Nigeria by 2015.

2. Literature Review

According to (Akubue 2001) and Acha (2009) women form about half the world population and any society which neglect such a large number of human resource potential cannot achieve any meaningful development. At the local and international level, population problems especially of women constitute the cornerstone of discussions about the gap between the actual numbers of women to employ, educate, equip, etc. In Nigeria, the underestimation of the female population growth has been blamed for the marginalization of women because the actual number is far higher than the number accounted for see Aderant, (2002), Annekova (2001), Iheduru (2002), Lewis (2006) and Mansor (2005). Nigeria census reveals no change as figures released from Nigeria's census indicates that the country's mainly Muslim northern states accounted for just over half of the country's 140m population in 1991. This is roughly the same result as shown in the last census 15 years ago. The combined gross enrollment for primary, secondary and tertiary schools for female was 57% compared to 71% for males in 2002, Ojo(2002). This translates into fewer women in certain economic fields as well. The percentages of female workers in some selected professions were as follow: architects-2.4%, quantity surveyors- 3.5%, lawyers-25.4%, lecturers- 11.8%, obstetricians and gynecologists-8.4%, pediatricians- 33.3% and journalist- 15.2%, Ojo (2002).

Peters (2010) said "there is no doubt that in any contemporary society, population either in terms of size or composition has far reaching implications for change, development and the quality of life. For instance, high population exerts pressure on the ecosystem leading to

issues around food security, land tenure, water supply and environmental degradation; Peters (2011). And on the economy, rapid population growth will demand that government spend more on provision of education, health, shelter, employment and other social facilities. This gives rise to need that actual number of women should be used to achieve and ascertain millennium development goal three (3), that is, to promote gender equality and empower women, instead of using small fraction of the women population. To correct these anomalies, Ayu (1987, 1992), Wushish (1993), Arene (1993), Mazrui (1991) rightly suggests that gender analysis be made a standard tool of economic analysis, and of project design and monitoring.

3. Methodology

Graphs, mean, median and percentages of the Nigeria population will be employed to enable the ascertainment of the level and differential of women in Nigeria. Also, the exponential growth model will be used to project of women population. It assumes that the increments in one interval contributes to growth in subsequent intervals and population grows continuously and not at the end of an interval. The woman population of Nigeria up to 2015 was used with the population of 2006 as the base year population.

4. Data Analysis and Interpretation of Results

4.1. The Age-Specific Distribution of Men and Women Educational Attainment by Sex

- *Educational attainment by background characteristics*

Figure 1, depicts educational attainment for men and women from the Nigerian 1991 population census showing the age specific distribution by highest level of men and women educational attainment from Table 1. Over 71 percent of women had no education while 43 percent of men had no education in Table 1. These figures indicate that in spite of the universal primary education (UPE) and universal basic education (UBE) schemes in the country many girls are still not enrolled in school.
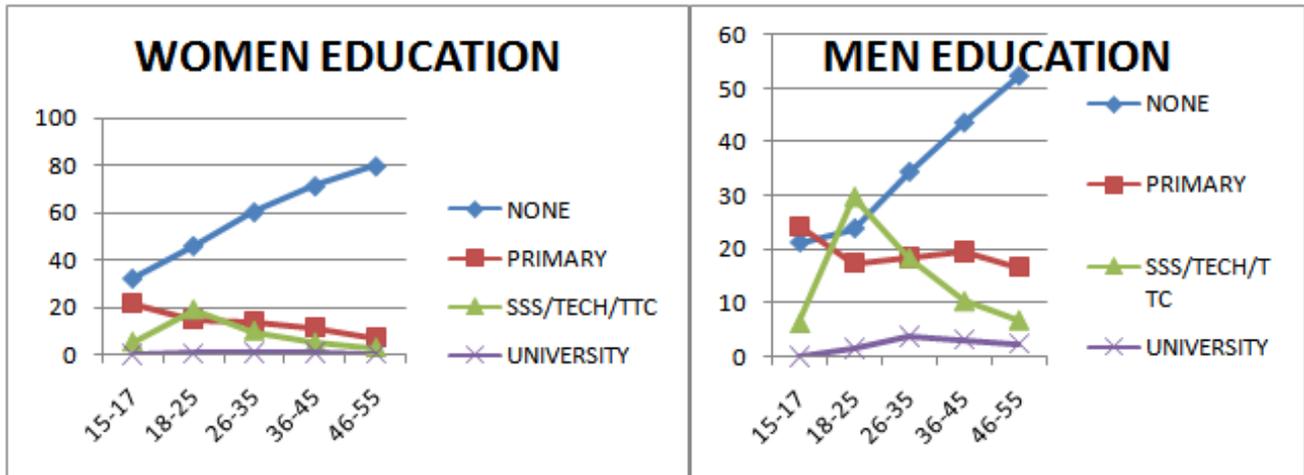

Figure 1. Educational attainment of women and men

Table 1. Age Specific Distribution by Highest Level of Men and Women Educational Attainment

Characteristic	Sex	Age –specific distribution by highest level of education attained by sex				
		15-17	18-25	26-35	36-45	46-55
None	Men	21.19	23.82	34.32	43.49	52.17
	women	32.43	46.14	60.38	71.28	79.65
Primary	Men	24.27	17.50	18.39	19.52	16.70
	women	21.46	14.64	13.47	11.02	6.96
SSS/Tech/TTC	Men	6.23	29.82	18.42	10.31	6.79
	women	5.19	19.01	10.01	4.98	2.73
University	Men	0.00	1.57	3.74	3.11	2.39
	women	0.00	0.64	1.05	0.71	0.48

Source: Nigeria, 1991 population census.

The mean years of schooling attained also reflects the gender parity in educational attainment: the mean number of years of schooling is 5.2 years among men and 5.1 years among women. The men respondents in the rural areas having completed 4.6 years of schooling compare with 3.8 years of women in rural areas. In addition, North West, which shows the lowest result in both cases also have an average of 3.5 years of schooling for men compared with 1.7 years for women. Figure 2 depicts mean number of years of schooling and educational attainment according to background characteristics in Table 2.
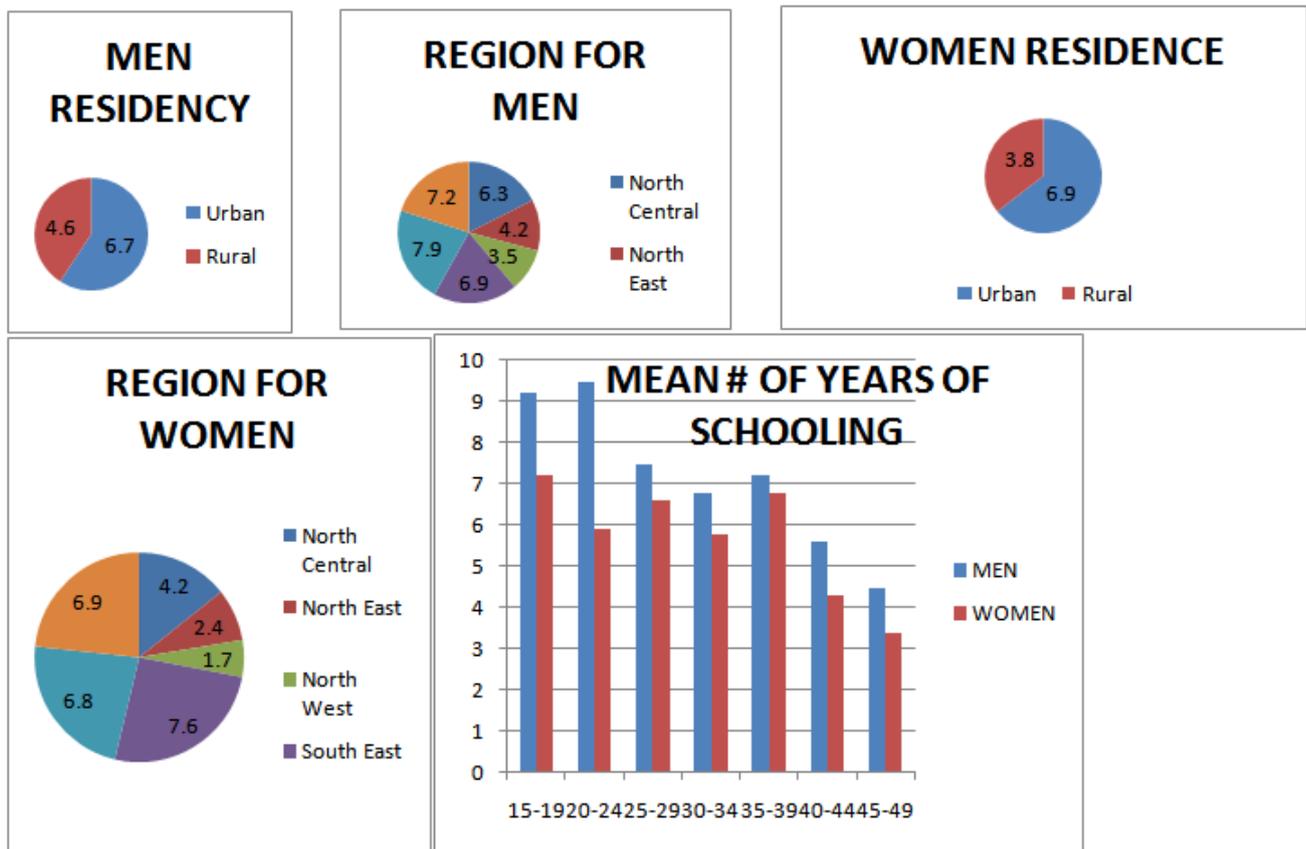
Figure 2. Educational Attainment according to Background Characteristics in NDES 2004

Table 2. Mean Number of Years of Schooling and Educational Attainment according to Background Characteristics in NDES 2004

Characteristics	Mean Number of Years of Schooling	
Age	**Men**	**Women**
15-19	9.2	7.2
20-24	9.5	5.9
25-29	7.5	6.6
30-34	6.8	5.8
35-39	7.2	6.8
40-44	5.6	4.3
45-49	4.5	3.4
Residence		
Urban	6.7	6.9
Rural	4.6	3.8
Region		
North Central	6.3	4.2
North East	4.2	2.4
North West	3.5	1.7
South East	6.9	7.6
South South	7.9	6.8
South West	7.2	6.9

Source: Nigeria Demographic and Education Survey 2004.

4.2. The Population for Men and Women at Specific Age Group for Education and Nigeria Projected Population by Sex

• *Population Projection According to Age Groups and Sex*

To obtain the rate of growth of Nigeria from the 1991 census to the 2006 census, where the population of Nigeria as at 1991 census is 88,992,220 and as at 2006 census is 140,431,790. The exponential equation;

$$P_t = P_0 e^{rn} \qquad (1)$$

where P_t = population at a given point in time or the projected population. P_o = total population at the point in time taken as base year sometimes called base line population. It is also known as base year population (population of year 2006), r = population growth rate, n = length of the interval between two time period, that is, 1, 2, 3,…,9 for 2007, 2008, ….., 2015 respectively and e = constant.

Taking the log of both sides in equation (1), then apply the product rule we have "r" to be

$$r = \frac{\text{In } P_t - \text{In } P_o}{n} \qquad (2)$$

where n = 2006-1991 = 15
P_t = population as at 2006
P_o = population as at 1991

$$\therefore r = \frac{\text{In}140431790 - \text{In}88992220}{15} = 0.0304 \text{ or } 3.04 \text{ %}$$

r=3.04% (population growth rate)

This implies that the 1991 population of Nigeria growing exponentially at an average rate of 3.04 percent would yield a population of about 140,431,790 in 2006.

Here, we illustration on how to calculate the projections in Table 3 using 2013 for example Recall, the formula

$$P_t = P_0 e^{rn} \qquad (1)$$

Where; n, r, P_o, P_t and e remain as defined.

• **Total population for 2013 (men)**

$P_{2013} = 71345488 \times e^{0.0304 \times 7} = 88,264,157 = 88.3$ million

- **Total population for 2013 (women)**

$P_{2013} = 69086302 \times e^{0.2128} = 85,469,234 = 85.5$ million

- **Total population for 2013 Age Groups (men)**

$P_{0-14} = 30462148 \times e^{0.2128} = 37,685,856$

$P_{15-64} = 38,348,799 \times e^{0.2128} = 4\ 7,442,726$

$P_{65+} = 2534541 \times e^{0.2128} = 3,135,575$

- **Total population for 2013 Age Groups (women)**

$P_{0-14} = 28274149 \times e^{0.2128} = 34,979,002$

$P_{15-64} = 38609933 \times e^{0.2128} = 48,013,212$

$P_{65+} = 2002220 \times e^{0.2128} = 2,477,021.$

Table 3. Showing the Projected Men and Women Population of Nigeria from 2007 to 2015 using their Age Group and Sex

Age group	Sex	2007	2008	2009	2010	2011	2012	2013	2014	2015
0-14	Man	31,402,417	32,371,709	33,370,920	34,400,974	35,462,821	36,557,445	37,685,856	38,849,098	40,048,245
	Woman	29,146,881	30,046,552	30,973,993	31,930,061	32,915,640	33,931,640	34,979,002	36,058,691	37,171,708
15-64	Man	39,532,504	40,752,745	42,010,652	43,307,387	44,644,147	46,022,169	47,442,726	48,907,131	50,416,737
	Woman	40,007,871	41,242,786	42,515,819	43,828,146	45,180,981	46,575,573	48,013,212	49,495,226	51,022,985
65+	Man	2,612,774	2,693,422	2,776,559	2,862,263	2,950,612	3,041,688	3,135,575	3,232,360	3,332,133
	Woman	2,064,022	2,127,732	2,193,408	2,261,112	2,330,905	2,402,852	2,477,021	2,553,479	2,632,296
	Total	144,766,469	149,234,947	153,841,352	158,589,942	163,485,106	168,531,368	173,733,391	179,095,985	184,624,105

SOURCE: Nigeria, 1991 population census (See appendix for illustration of computation).

From Table 3, the first column is for age group which is divided into three categories (0 to 14, 15 to 64, and 65 and above). Age group (0–14) has a total population of 58,736,297 being made up of 30,462,148 men and 28,274,149 women, age group (15 – 64) has the total population 77,158,732 being made up of 38,348,799 men and 38,809,933 women, the age group (65+) which is the last category has the total population of 4,536,761 being made up of 2,534,541 men and 2,002,220 women. The sum of it gives the grand total of 140,431,790 as the population of 2006 and the projected values of the population for years 2007 to 2015 using the year 2006 as the base year population. From the projected figures, the total population of Nigeria growing exponentially at 3.04% will increase from 140 million in 2006 to 168.5 million in 2012 as against the estimated 170 million at 2.53% from the central intelligence agency (CIA) world fact book. However, from the base year shows that the women population will rise from 69 million to (85.5, 88.1 and 90.8) million in 2013, 2014, and 2015 respectively. Also for the men population will also rise from 71.3 million to (88.3, 91.0, and 93.8) million in 2013, 2014, and 2015 respectively.

5. Summary, Conclusion and Recommendations

5.1. Summary and Conclusion

The main objective of this paper is to ascertain the level, differential, and prediction of gender equality of women in 2015. The population projection by age group and sex in Nigeria is shown in Table 3 used the year 2006 as the baseline population with population growing exponentially at the rate of 3.04%. Projections were made for years 2007 to 2015. With population projection, estimate about the future can be made and this helps in providing the necessary information for future planning especially for women because by 2015 the population of women will be greater than that of men. The tremendous increase in Nigeria population depicts that the realization of the third millennium development goal which is to promote gender equality is far from realization. This also means that to promote gender equality by 2015 is at risk after having missed the initial deadline of 2005.

5.2. Recommendations

In this course of study, we have found out that women population should not be neglected in the development and plan of the Nigeria economy. Therefore, there is need to improve in accuracy of these data such that its effect on planning will enhance economic development. Considering the findings, the following recommendations are made:

i. Data collection is very expensive and very vital as well, government should provide enough funds to counter the financial challenges involved in data collection so that the accurate population especially women population will be ascertained.

ii. Government should provide sufficient fund towards sensitize the key people in that particular area that can disseminate the importance of training women.

iii. Government should allow women to contribute and participate fully in all aspects of life in Nigeria.

References

[1] Acha, C. K. (2009) Women empowerment as a measure of good governance in Nigeria, *International Journal of Natural and applied sciences*, 5(2):167-173.

[2] Aderant, I. A. (2002) *Situation Analysis of the Status of Women in Nigeria*. Concept Publications, Lagos.

[3] Annekova, V. (2001) *Global Approach to Fostering Development of Women Entrepreneurship*, FSA Contemporary Issues, IREX. Available on-line: On Nigerian Women In Development" by Ayu (1987, 1992), Wushish (1993), Arene (1993), Mazrui (1991) "Posted to the web: http://www.onlinenigeria.com/links/adv.asp?blurb=95 7/14/2002, 7:55:15AM; viewed on 14-04-14.

[4] Iheduru, N. G. (2002) *Women Entrepreneurship and Development: The Gendering of Microfinance in Nigeria,* Paper Presented at the 8th International Interdisciplinary Congress on at Makeree University, Kampala - Uganda Women, p. 21-26.

[5] Lewis, P. (2006) The Quest for Invisibility: Female Entrepreneurs and the Masculine Norm of Entrepreneurship', Gender Work and Organization, 13(5): 453-469.

[6] Mansor, N. (2005) Women in Business: Determinants for Venturing in Malaysians SMEs. www.tbs.ubbc/uj.ro/studia/articol_4_2_2005.

[7] Nigeria Demographic and Health Survey (2003).Abuja; National population commission.

[8]   Nigeria Demographic and Education Survey (2004); from Nigeria demographic and health survey 2003. Abuja; National population commission

[9]   Nigeria Demographic and Health Survey (2008).Abuja; National Population Commission.

[10] Nigeria 1991 Population Census.Abuja; National Population Commission.

[11] Ojo, A. (2002). "Socio-Economic Situation", in Africa Atlases (Nigeria), Paris-France, Les Editions J.A., p. 126-127.

[12] Peters, A.A. (2010). "*Population and Human Resource Development in Nigeria*". A paper presented to Course 19 participants at the National Defence College, Abuja.

[13] Peters, A.A. (2011). "*Population and Human Resource Development in Nigeria*". A paper presented to Course 20 participants at the National Defence College, Abuja.

[14] Nigeria Sentinel Survey (2007).Abuja; National Population Commission.