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An Analysis of the Gender Distribution in Nigeria

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ABSTRACT

The gender distribution in Nigeria from early education up till the highest levels of decision-making is explored in this study. The objectives were to: examine the progression in the gender distribution from early education to the high decision-making positions; test for gender parity in education and some sub-divisions of the labour force in Nigeria, and in cases where there are disparities, to ascertain the degree of such disparities based on the 35% benchmark for females, set out in various global and national protocols. Data was elicited from several sources covering education, public service, politics and the judiciary. Tests of hypothesis were carried out to test for gender parity in education and to ascertain the level of attainment of the minimum threshold in other segments of the population. The gender progression curve was also presented to give a graphical overview of the movement of the gender distribution. Our results show that while progress has been made in bridging the gender gap in education, disparities still exist in other sectors. The female population in the lower and middle level manpower positions significantly exceed the 35% benchmark, while the female proportion in the high positions remains very low, under 10%.
Keywords: Proportion; test of proportion; gender parity; gender distribution; gender progression.

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Introduction

A recent bill at Nigeria's upper legislative chamber on gender equality, thrown out in its totality by the Senate, underscores the depth of the resistance by entrenched political interests at creating a level playing field for Nigerians to thrive in their chosen endeavour irrespective of gender. Women have been at the receiving end of several negative actions over the years, thereby putting them at a disadvantaged position in pursuit of their goals.

An opinion survey in Nigeria conducted by the International Foundation for Electoral Systems (IFES, 2015) reflected the sharp division between men and women on attitudes towards women representation in high political positions. About 51% of men and 61% of women would not vote for a woman as president even if she was as qualified as the male candidates. It could thus be seen that even the womenfolk in Nigeria, significantly contribute to the resistance of female representation in high decision-making and leadership positions.

The Beijing Platform for Women identified twelve critical areas of intervention for women empowerment: poverty, education, health, gender-based violence, armed conflict, economic participation, inequality in power and decision making, lack of advancement opportunities, human rights, women and the media, natural resources, environment; and issues around the girl child.

The 2014 Statistical Report on Women and Men, released by the Nigerian Bureau of Statistics (NBS)

captured data from six broad policy areas: population, education, work, power and decision making, as well as violence and crime. It reflected several perspectives on the level of gender distribution in the Nigerian polity.

Women make up about 50% of Nigeria's population (NDHS, 2014), but their presence in positions of leadership and authority in various spheres of the nation has been an issue of concern to genuine stakeholders. The importance of women participation in various areas of contemporary society has been well established over the years.

Women play a critical role in nation building and should be sufficiently represented in key aspects of any nation's developmental architecture.

There are several factors contributing to gender imbalance in Nigeria, but it has to be said that at the early stage of education, such hindrances may have been eliminated as recent data point to gender parity at the primary and secondary level, with a minimal shift in favour of the males at the tertiary level (Ayansina, 2016).

Even among the women folk, there is a sharp division on the place of women in the political stratosphere (the upper echelon of the political space) or the commanding heights of the business and entrepreneurial space.

Some of the reasons for gender disparity in Nigeria are cultural or religious practices that limit women participation in some areas; reservations in exposing the issue as a problem that should be solved: men's ability to work long hours; peculiar needs of women and pay differentials between the sexes in many jobs.

Nigeria has never had a female Service Chief or Inspector General of Police. It would seem that very few women progress to the highest levels in the Military establishment and the Police.

Male chauvinism has been a part of human societies since time immemorial. The Holy Bible contains the story of a woman caught in the act of adultery and brought before Jesus Christ for judgement. The fact that her male accomplice was let off the hook while she was hounded by the Jews, succinctly encapsulates some of the problems faced by the female sex in a male-dominated world. Gender imbalance is therefore not a problem peculiar to Nigeria. Indeed, it is a global phenomenon afflicting all parts of the world, from developed to developing countries alike.

Keifer (1934) reflected the fact that an adulterous wife in ancient Rome could be killed by her husband without trial, while the reverse attracted no punishment of the man.

The United Nations Educational Scientific and Cultural Organization (UNESCO, 1999), views gender equality as a global priority and has put in place efforts to promote the right to education for all, irrespective of gender.

In Nigeria, while there is a common viewpoint on the low political representation of women, two opposite schools of thought could be adduced by the submissions of Arowolo (2010), who argues that the actual role of women generally ends in the home front and Erunke (2009) and Agbalajobi (2010) who argue that women should have equal opportunities in the political system as their male counterparts. This argument

between the conservative theorists and the liberalists has continued till date.

While several authors opine at gender bias in education, the present reality as captured by data, hardly supports such argument, as education data of intakes and graduates at all levels of education tend to puncture the claim of gender imbalance. While it could be conceded that there was gender imbalance in the educational system for a greater part of the post-independence era, efforts at both the state and national level have been put in place to stem the tide, and positive results are visible with recent data released by the Nigerian Bureau of Statistics on gender distribution in various policy areas of the country. This is also supported by the 2015 Education Data Survey, conducted by the National Population Commission NPC, in collaboration with the Federal Ministry of Education, which showed that the country has been able to eliminate gender gap in school attendance in its educational system (NPC, 2016). The survey was a follow up on the 2013 Nigeria Demographic Health Survey NDHS, where households with children from 4 to 16 years in 2013 were revisited. The report covered about 30,000 households and more than 45,000 children between the ages of 4 and 16 years.

Some researchers have argued that in a democratic society, power acquisition and control is achieved privately or collectively, irrespective of gender through a process of active participation and representation, ruling out the question of gender discrimination in terms of nomination/ contestation of persons or groups into political offices (Okuosa, 1996).

When in 1985 Professor Grace Alele-Williams became the first female Vice-Chancellor of an African university, it was a milestone for the women folk. But over 30 years down the line, the scenario has remained unchanged with only 5 women as Vice-Chancellors in Nigeria's 124 public and privately-owned universities.

Abdullahi (2016) weighed in on the rejection of the gender and equal opportunity bill by Nigeria's upper legislative chamber, the Senate. He opined that for too long, people have hidden under the banner of religion to give expression to their syncretic traditions or practices. He stressed that it was high time this culture of silence is dismantled, further saying that Nigerian women usually lack the resource and social capability to access political and public offices. He says that several critical and non-systemic factors contribute to retard the participation of women in the public space. He claimed that access to resources is the most critical factor militating against women.

Abdullahi (2016) also asserted that religious practices that frame women in the narrow roles of reproductive and spousal commitments alone are wrong. As a way of further creating a level field, he cited the Norwegian example in which the state got more involved in the task of child rearing, with the establishment of children centres and giving of parental incentives in order to free women for more public activities and greater access to the labour market. Whether this solution template could be of much utility in the Nigerian scenario is up for argument. In conclusion, in the opinion of the author, what is at the heart of the

matter in the gender debate is always how men think about women and how women think about themselves in relation to political power. Women's own psychological internalization of inferiority would continue to constitute as much barrier to the quality of women's political participation as men's domination of women.

Some countries have been able to increase women's representation on boards through constitutional reforms and the adoption of new policies. Kenya for instance increased women's representation on boards from 2.5% in 2010 to 20% in 2012 as a result of the 2010 constitution which mandated that not more than two-thirds of board members in state-owned enterprises or in firms where the government's stake is more than half, should be of the same gender (Ogbonna, 2016). Similarly, in 2003 Norway imposed a gender quota requiring at least 40 per cent of board members in publicly listed companies to be women; this target was met in two years. Nigerian companies can also play their part by instituting procedures which make the board nomination process more transparent and actively solicit applications from qualified women (Ogbonna, 2016)

Women constitute roughly half of Nigerian's population (NBS, 2009) and thus potentially half of its work force. As a group, they do as much work as men if not more. However, the types of work they do, as well as the condition under which they work and their access to opportunities for advancement differ from men.

Women are, often, disadvantaged compared to men in access to

employment opportunities and conditions of work; furthermore, many women forgo or curtail employment because of family responsibilities. The removal of obstacles and inequalities that women face with respect to employment is a step towards realizing women's potential in the economy and enhancing their contribution to economic and social development. The Beijing Declaration affirms national commitment to the inalienable rights of women and girls and their empowerment and equal participation in all spheres of life including the economic domain.

The Beijing Platform for Action (BPA), identifies women's role in the economy as a critical area of concern and calls attention to the need to promote and facilitate women's equal access to employment and resources as well as the harmonization of work and family responsibilities for women and men.

Furthermore, the Millennium Development Goals (MDGs) target the achievement of full and productive employment and decent work for all including women and young people as part of MDG 1 to eradicate extreme poverty and hunger.

The aim of this research is to study some aspects of Nigeria's gender distribution in relation to education and economic/ political power. We seek specifically, to track the female population from the early ages as it proceeds through education (primary, secondary, tertiary) and conjecture where the mass of the female population is located after education. Gender parity shall be examined at various stages of the growth of the girl child from early education to attainment of the highest

positions of power in Nigeria. In cases where obvious disparity exists, the level of such disparity will be ascertained using the minimum benchmarks as encapsulated in various existing protocols and policy documents on gender, such as the National Gender Policy, United Nations Security Council Resolution 1325 on 2000 and the Beijing Declaration. The minimum has been put at 35% in most of the policy documents.

In order to examine the dynamics of the gender distribution from primary school enrolment up to the higher echelons of political, educational, legislative and judicial spheres of decision-making and power, it is necessary to have a longitudinal study of a cohort of individuals (say, all persons born in 1960) and examine the gender distribution of this cohort as the population ages. However, it is a huge task to accomplish; hence the concept of life tables as applied to demography is adopted.

In section 2, the basic methodology and data used for the study are outlined, results are presented and discussed in section 3, while the conclusion is given in section 4.

Materials and Methods

In constructing current life tables based on the mortality experience of a cohort for a short period of time (say one year), the basic assumption is that the hypothetical cohort is subject to the age-specific rates that were observed for that particular period (Rustagi, 1985). This is the fundamental backbone behind the conceptualization of the gender progression curve which provides a bird's

eye view of the dynamics of the gender distribution currently. Thus current data on the gender distribution is used to make projections into the future on the basis of the present scenario under the assumption

that the current situation remains the same. This is the justification in the preparation of life tables in demography and is quite apposite for the present study.

The z-test is a common test for proportions. For the single-sample test of proportion, the null hypothesis, H_0 and the alternative hypothesis, H_1 are given as

$$H_0: p = p_0 \text{ versus } H_1: p \neq p_0$$

The test statistic and the decision rule for such test of proportions are basic ingredients in standard statistical texts, hence they are omitted here.

The data were obtained from multiple sources and capture the gender distribution in various segments of the Nigerian population. The main source of the data was Nigeria's National Bureau of Statistics (NBS, 2014), which has the statutory mandate to ensure credible data generation across Nigeria. Other data sources were the National Assembly (data on the gender distribution in the National Assembly), National Universities Commission (data on Vice-Chancellors of universities in Nigeria). In the few situations where national data were not available, corresponding gender distribution data were obtained from the University of Ilorin annual report, 2015, especially on academic staff gender distribution and student intake and graduation. The choice of University of Ilorin as a case study upon which inference about the federation could be made was made because of the availability of the needed data from that source. Upon a closer scrutiny of the gender distribution data emanating from the University of Ilorin, it should be pointed out that some of the proportions

shown in the University of Ilorin data, were in agreement with aspects where national estimates were available in the data from the NBS. It is therefore reiterated that the choice of data relating to the University of Ilorin was due to the lack of national estimates; hence the proportions obtained serve as estimates of the unknown national proportion for the chosen segment.

The data on the gender distribution during the period of acquisition of education and the working-class population, as pieced together from various data sources are presented in table 1. It shows the progression of a hypothetical population from the early stages of education until attainment of tertiary education, and then to various levels of economic and political power from the working class to the political office holders in the public service, education and government and the judiciary. In order to put the gender distribution in a clearer perspective, the entire population was aggregated into four segments, namely education, lower cadre working class, middle-level manpower, and high decision-making position. The education segment consisted of the population from primary school enrolment to NYSC, while the

lower level manpower consisted of the working class made up of primary and secondary school teachers, as well as junior staff in the Civil Service of states of Nigeria. The middle level manpower consisted of teachers in the State Colleges of Education up to academic staff of universities and polytechnics. Justices of the Federal High Court, the Supreme Court and political offices at the state and federal level, as well as Vice-Chancellors of Nigerian Universities are grouped under the high decision-making positions. This categorization is to obtain a sectoral view of the population according to the various segments.

Figure 1 captures graphically, the gender progression from primary education to the high decision-making positions. The gender progression curve reflects the dynamics of the gender distribution over time. The basic principle behind the conceptualization of the gender progression curve lies in the formulation of life tables in demography. In a life table, a cohort of individuals is followed over time and observed until the event of interest (i.e. mortality) occurs. If sufficient information is available, a life table may be formed by setting forth the complete history of past events as they occurred, but the opportunities for doing so do not often arise, and the result would, to a great extent, be of little relevance at the time of its preparation (Cox, 1975), as the information provided may have become stale. A more common approach is to use current data to represent what such history would be under certain underlying assumptions. It should however be noted that the

limitations must be reflected so as not to produce misleading conclusions.

An alternative graphical presentation of the data as set forth in the gender progression curve could be a multiple bar chart detailing the male and female population in all the listed sectors, but that would not provide a more compelling view of the gender dynamics, hence the conceptualization of the gender progression curve.

The most recent data on the gender distribution in various segments of Nigeria's population provided information up to the year 2013. This is the reason why most of the sectors had 2013 data depicted in Table 1.

Table 1. Gender distribution of educational training and workforce in some sectors in Nigeria along with the female proportions.

	Sector	Total (n)	Number of Females	Proportion
1.	Enrolment in primary schools, 2013	9551265	4577032	0.48
2.	Primary school completion, 2013	2600305	1212307	0.47
3.	Enrolment in secondary schools, 2013	9835240	4657882	0.47
4.	Secondary school completion, 2013	2175659	1017604	0.47
5.	WAEC enrolment, 2013	1670305	750633	0.45
6.	Undergraduate entrants (University of Ilorin, 2014/2015 Session as a sample)	12603	5915	0.47
7.	Graduates, University (University of Ilorin, 2014/2015 Session as a sample)	5538	2615	0.472
8.	NYSC Participation, 2013	208160	94689	0.45
9.	Primary School Teachers, 2013	433076	209288	0.48
10.	Secondary School Teachers, 2013	190725	90987	0.48
11.	Junior Staff in State Civil Service, 2013	117966	48436	0.41
12.	Teachers in state-owned Colleges of Education, 2013	15270	5461	0.36
13.	Senior Staff, State Civil Service, 2013	180040	67738	0.38
14.	Professionals in State Civil Service, 2013	106419	36189	0.34
15.	Academic Staff, University (University of Ilorin as a sample)	1316	298	0.23
16.	Academic Staff in state-owned Polytechnics, 2013	8890	1689	0.19
17.	Justices of the Federal High Court	82	25	0.305
18.	Justices of the Supreme Court	15	3	0.2
19.	Federal Ministers, 2015	36	5	0.139
20.	State Deputy Governors, 2015	36	4	0.111
21.	Nigeria's Parliament, 2015	469	22	0.047
22.	Vice-Chancellors of Nigerian Universities, 2016	124	5	0.04

Sources: National Bureau of Statistics, University of Ilorin, National Assembly, Nigerian Universities Commission.

Table 2. Summary results from test of hypothesis of the weighted proportions for the educational and workforce segments of the population.

Segment	Size (n)	$\hat{p}_w$	Hypothesis	z	p-value
Education	26059075	0.48	$H_0: p = 0.5$ $H_1: p \neq 0.5$	-204.192	<0.0001
Lower Level Manpower	741767	0.46	$H_0: p = 0.35$ $H_1: p > 0.35$	198.626	<0.0001
Middle Level Manpower	311935	0.36	$H_0: p = 0.35$ $H_1: p > 0.35$	11.71	<0.0001
High/ Decision-Making Position	762	0.08	$H_0: p = 0.35$ $H_1: p < 0.35$	-15.63	<0.0001

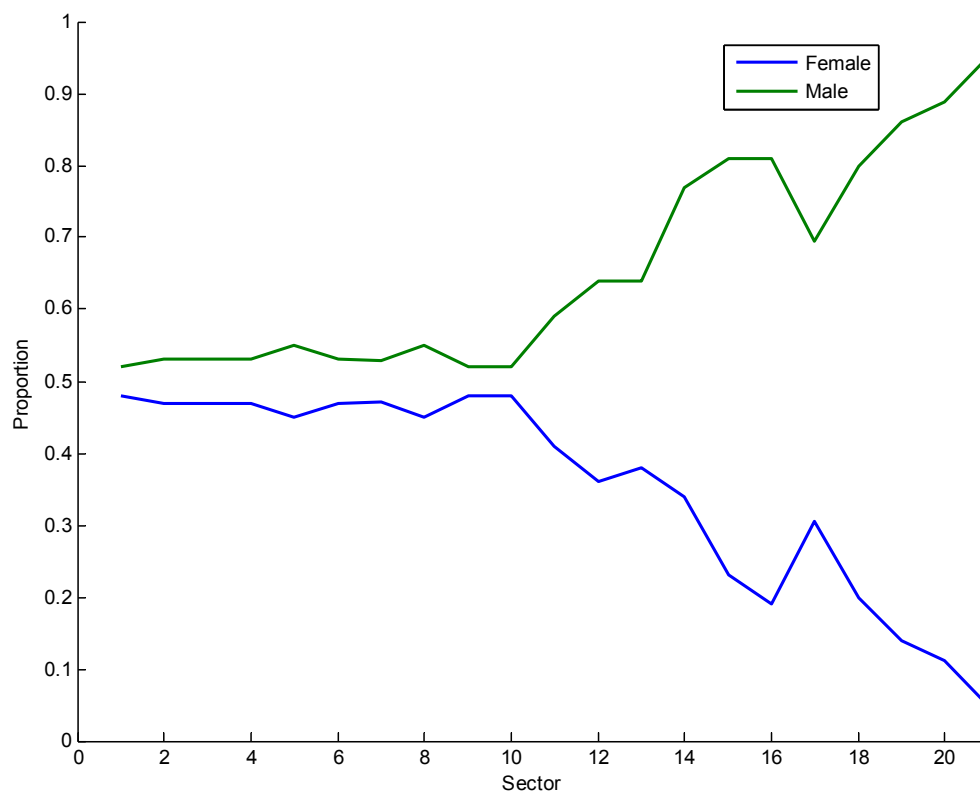


Figure 1. Plot of the gender progression curve showing the gender distribution from early education to the higher decision-making positions

Results and Discussions

The gender progression curve, as shown on figure 1 provides a good perspective on the current population. This curve gives a graphical view of the population in relation to the gender distribution and how the population would progress along the various broad sectors. The figure has two curves which are the male and female proportions. At the earlier levels of education, the two proportions are close to each other, and this is shown in the parallel line that extends up to the period of but as the proportion progresses

The population was aggregated into four disjoint segments, namely education, low-level manpower, middle-level manpower and high/ decision-making position, and their weighted proportions $\hat{p}_w$ were computed. Relevant hypotheses were tested and the p-value obtained as a guide to the decision rule on whether to reject or not reject the null hypothesis. Table 2 captures the results of these tests of hypotheses.

From the results presented in table 2, it could be seen that although the hypothesis of gender parity is rejected at the 5% level of significance, the value of the weighted proportion for the educational period was 0.48, which is close to the hypothesized value of 0.5. It can thus be said that there is only a marginal difference in the gender distribution, as far as the educational period is concerned. This result is in agreement with recent interventions that posit that Nigeria has bridged the gender gap in education (Ayansina (2016) and (NPC (2016)). It could also be inferred from the result that efforts by

government and the relevant stakeholders to bridge the gender gap in education has yielded positive results. It would seem that those cultural and religious barriers hindering the girl child's access to basic and tertiary education are being relaxed, and more girls are getting basic and tertiary education.

From table 2, it could also be seen that the subsequent levels after the educational period showed substantial departure from the hypothesized gender parity, going from $p_w = 0.46$ for the lower level of the working class, to $p_w = 0.36$ for the middle level and the lowest of $p_w = 0.08$ for the high decision-making positions. These group proportions were then tested whether they differ significantly from the established minimum threshold of 0.35. It was seen that both the low and middle level manpower segment of the population exceeded the threshold, as the null hypotheses were rejected in both cases. Thus these two segments of the working population are far above the minimum benchmark of 35% female representation.

It is in the area of the fourth segment, which captures the upper echelon of the power echelon, both economic and political, that there is a very huge gender gap, as less than 10% of such positions are occupied by women. This is the area that much work has to be done in trying to bridge the gap, as there is a wide gulf in terms of the proportion of those positions occupied by women.

The gender progression curve, as shown in figure 1, provides a pictorial view of the turning point at which the gender gap begins to widen progressively. It could be seen that the gap begins to widen after the

acquisition of tertiary education and completion of the mandatory one-year National Service (NYSC). From that point onwards, the female proportion in the workplace and in high decision-making political positions, experience a gradual decline that then becomes steep as the powerful political and economic positions are reached.

It could be conjectured that a greater proportion of educated Nigerian women are employed in the non-formal sector, many having their own businesses or trade, which they combine with the upkeep of their homes. Also, in some regions in Nigeria, some well-to-do husbands would not allow their wives to take up white-collar jobs. The private sector of the economy could also account for a substantial chunk of the educated female population.

Conclusion

Nigeria has made tremendous progress in bridging the gender gap in education, hence efforts should be made to sustain this gain and create enabling environment for both sexes to develop on an equal keel. The critical mass that generates the manpower supply to every other sector is education. To this end, the seeming gender balance in education provides a solid foundation upon which there could be more improvement in the gender distribution as one moves up the ladder. Efforts should be focused on the middle level and especially on the high decision-making and power positions. This is where conscious efforts and policies should be put in place to encourage participation and career progression for the women folk. Thus, restrictive gender-biased workplace conditions and political conditions

should be relaxed and those desirous of positions of power should not be discriminated upon, under any circumstances.

An area of further research could be a more comprehensive look at the gender dynamics to ascertain the trend in the gender distribution across various sectors, as well as constructing a more comprehensive gender progression curve that captures majority of the segments of Nigeria's population so as to have a better understanding of the current gender profile of Nigeria.

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