# Gender and Human Capital Development: Evidence from Selected Higher Institutions in Nigeria

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**Abstract**

*Access to education has been tasking especially among the girl-child when school enrollment is considered. This has prompted nations zeroing in consideration on gender disparity through Millennium Development Goals (MDGs) that transformed into Sustainable Development Goals (SDGs). Consequently, this paper looks at gender and human capital development orientation with evidence from selected higher institutions in Nigeria. The paper adopts the survey method of research and Gender Parity Index (GPI) for data analysis. Findings show a male-centred framework as there exist a significant gender difference in human capital development, which by inference are socially built negative attitudes towards female professionals, and this hinders their pedagogic endeavours and professional development. The paper suggests organizations must have gender orientation objectives, systems and exercises for mainstreaming in human capital development. Finally, stopping gender differences in human capital development would assist in elevating the status and abilities of women forall-inclusive national development.*

**Key Words:** Gender, Human capital development, Inequality.

**JEL Classification**: 043, 012, D13

## 1. Introduction

For sustainable improvement in human capital to be achieved, equality in gender is mandatory. Since the Beijing Declaration and Platform for Action in 1995, significant advancement has been made, yet in the meanwhile alongside existing deficits, new and broad difficulties have arisen, relating both to ladies status and the full acknowledgement of their basic liberties. Schooling is an engine of development and key to improvement in each general public, in light of its quality and amount. To make a significant commitment to economic development and improvement, top-notch training is essential. The twenty-first-century worldview is moving towards the improvement of information as a need. This has likely been a result of the reverberation of states associating their higher instructive frameworks significantly more near their different economic improvement methodologies.

Economists and financial analysts accept that training is an economic good because it is not effectively obtainable and accordingly should be allocated. They also view instruction as both a consumer and capital goods, since it offers utility (fulfilment) to a buyer and fills in as a contribution to foster the HR vital for financial and social improvement. The emphasis on training as a capital good identified with the idea of human resources, which underscores that the improvement of abilities (skills)is a significant factor in productive activities. It is broadly acknowledged that schooling enriched the welfare of citizens and assists with positively

overhauling the overall way of life in the general public. The collective confidence in instruction as an influencer in many emerging economies has prompted generous interests and spending in it. The strain to get advanced education in many less developed countries has without a doubt been helped by an open view of monetary compensation from seeking after such schooling. There is a conviction that extending instructive freedoms and access advances economic development.

Physical and human capital stocks are causative factors for a prosperous economy and working of a country. Physical capital has by custom been the focal point of economic exploration and research, factors influencing the improvement of human abilities (skills) are progressively figured in the examination of social and conduct (behavioural) sciences. In everyday terms, human resources address the venture individuals make in them that enhance their economic usefulness and efficiency. The hypothetical structure generally liable for the healthy reception of training and improvement approaches have come to be known as human resources theory.

Since its origin in 1990, the Human Development Report (HDR) has introduced numerous parts of these differences– like those in instruction, work, wellbeing, political cooperation and regularly basic issues identified with information and estimation. The 1995 HDR was one of the principal worldwide development-related publications to carry these thoughts to the front in an incorporated way, including a show of the historical and political development for sexual orientation uniformity inside the human improvement worldview. Much advancement has been made in the last two decades in reducing –these disparities; be that as it may, the - unfinished tasks are as yet articulated and new provokes proceed to arise, and new knowledge is produced. For instance, Ainaet al. (2015) argue the prevalence of gender disparity in higher institutions in Nigeria, which is supported with incidences of discrimination and biasedness such as sexual harassment. Students' admissions, job placements and policies on administration are some of the examples of this partiality in Nigerian tertiary institutions.

Most girls are admitted into faculties like humanities, agriculture, and rural development: unlike boys who are admitted to read engineering and science-based courses. Education of girl-child in Nigeria is confronted with numerous problems chief among which are poverty, ignorance, unwanted pregnancy, religious beliefs, child marriage, preference for a boy to girl, etc. In the same vein, Nigerian institutions are not gendered friendly, therefore, have no adequate provisions to meet the needs of female students. Given the foregoing analysis, this paper is to examine gender and human capital development-with evidence from selected higher institutions in Nigeria. The paper is divided into six sections. This introduction is followed by an overview in section two and a conceptual and theoretical framework in section three. Section four is methodology while section five is findings and discussion. Section six concludes the paper with policy recommendations.

**2.0 Literature Review**

This sub-section reviews relevant literature on gender and human capital development. It consists of the conceptual framework, theoretical framework and empirical review.

**2.1 Conceptual Review**

The Commonwealth of Learning (2017) listed the following concepts on gender:

**Gender**: It is the segregated roles both socially and culturally as well as prospects and limitations confronting females and males due to their gender or their biological dissimilarities. **Gender analysis:** It is taking a look at the effect of development on males and females by sorting out data by gender, and knowing how a job, for instance, is distributed, appreciated and remunerated. It looks at how an action, resolution or strategy will touch each gender.

**Human Capital**: It is the course of action geared towards the improvement of the capabilities, resources and performance of a worker in an organization. The development of human capital is important to the expansion efficiency of the organization. Those that are responsible for the running of an organization are assets that must be invested in.

**2.2 Theoretical Review**

Human capital theory **(**HCT) is grounded on the idea that schooling is a necessity to improve the productivity of the labour force. HCT theorists postulate that a knowledgeable populace produces creative people. "The theoretical framework most responsible for the wholesome adoption of education and development policies has come to be known as human capital theory (HCT). Based upon the work of Schultz (1971), Sakamota and Powers (1995) and Psacharopoulos and Woodhall (1997). The human capital theory rests on the assumption that formal education is highly instrumental and even necessary to improve the production capacity of a population. In short, the human capital theorists argue that an educated population is a productive population" (Olaniyan & Okemakinde, 2008, p. 479).

According to Woodhall (1997), HCT emphasizes what way knowledge acquisition improves employee's productiveness and efficiency by an increase in the rate of reasoning of actively resourceful man's competence that is an outcome of inborn talents and investing in people. Delivery of official schooling is likened to investing in human resources, which advocates of HCT postulated in the same way or fact, better useful than tangible assets. This study is anchored on HCT because of its relevance to the topic which seeks to analyze gender and human capital development in some selected higher institutions in Nigeria.

Renowned economist, Smith(1976) publication titled, *The Wealth of Nations* detailed the premise of what was later to turn into the study of human capital. Throughout the following two centuries, two ways of thinking were recognized. The principal way of thinking made a distinction between gained capacities that were named capital and individuals themselves, who were not. The second way of thinking asserted that individuals themselves were capital. In the current human resources theory, all human conduct depends on the economic self-interest of people working inside uninhibitedly aggressive and competitive markets. HCT focuses on the meaning of schooling and preparing as the way to invest in the new worldwide economy. The achievement of any country as far as human advancement is to a great extent reliant upon the physical and human resources stock.

Accordingly, late friendly exploration centres on the behavioural studies of humankind comparable to economic efficiency. For the most part, human resources address the resources every individual creates to upgrade economic productivity. Moreover, human resources are concerned about the wholesome acceptance of educational and developmental policies. To put

it plainly, the human resources scholars contend that an informed populace is a useful and productive one. Human resources theory stresses how training builds the productivity and proficiency of labourers by expanding the degree of intellectual load of economically productive human capacity, which is a result of natural capacities and interest in people. The provision of formal schooling is viewed as a useful interest in human resources, which the defenders of the theory have considered as similarly or considerably more similarly beneficial than that of physical capital (Almendarez, 2011).

As indicated by Babalola (2003), the levelheadedness behind the interest in human resources depends on three contentions:

1. The new generation should be given suitable pieces of the information and knowledge which has as of now been collected by past generations.
2. The new generation ought to be shown how existing information and knowledge ought to be utilized to foster new items, to present new cycles and creation techniques and social administrations;
3. People should be urged to grow groundbreaking thoughts, items, cycles, and techniques through innovative methodologies.

Fagerlind and Saha (1997) postulate that human capital theory gives essential support to huge public spending on learning both in emerging economies and advanced nations. The theory is consistent with the philosophies of majority rule government and liberal movement found in most western social orders. Its allure depended on the assumed economic return of investing in schooling at both the full scale and miniature levels. Endeavours to advance interest in human resources resulted in quick economic development for society. For people, such investment supposedly provided returns as individual economic achievement and accomplishment. Most economists concur that it is the HR of a country, not it is capital or material assets, which at last decide the character and speed of its economic and social turn of events. HR establishes a definitive premise of the abundance of countries. Capital and natural resources are inactive factors of production, individuals are the dynamic agencies who amass capital, exploit natural resources, construct social, economic, and political relations, and convey forward national development. This study lines up with a human capital theory.

Men hold 74 per cent in senior academic posts in the universities in Ireland (HEA, 2019). This offers an implied meaning to female students and initial career womenfolk that their future in these organizations is bleak. It likewise has the direct hands-on inference that there are few females in key decision-making ventures in institutions of higher education. This sequentially continues a male-dominated arrangement since males will be inclined to employ males (Lynch et al., 2012). Such an arrangement is uncooperative in terms of invention, inquiries, output and economic growth (OECD, 2012; EU, 2012) and is above all objectionable in publicly-funded institutions of higher education.

**2.3 Empirical Review**

Barro (1996a) examines gender distinct human capital as a determining factor of growth for 89 countries from 1960 to 1990. The variables he considered among others were the rate of growth of real per capita, years of post-primary school and tertiary education for males 25

years old and above, and the same for females. Using 3 equations instrument variable analysis, he finds that the assessed measurement on boys' education was significant and positive, while that of the female is significantly negative, which shows the perplexing trend pronounced by some authors  A plausible reason could be a connection between the difference in boy and girl education and emerging economy.

Benavot (1989) examines the consequence of separate gender human resources on the performance of the economy for 96 countries from 1960 to 1985. The author used the following variables among others: Boys' admission in primary or girls' primary admission, and feminine post-primary registrations or boys' post-primary enlistment. Using an ordinary least square (OLS) panel estimation method, Benavot finds that both the rates of boys' and girls' primary admissions have strongly and positively affected the performance of the economies. Birdsall, Ross and Sabot (1997) examine separate gender human resources on the performance of the economies for 108 industrialized and emerging nations from 1960 to 1985, using an ordinary least square (OLS) estimation methodology

Among variables, the authors considered were rates of both male and female secondary school enrolment. Their findings show insignificant dissimilarity among the measurement figures for both genders. This proposes that an increase in pre-secondary enrollment of both genders are important in improving the economy.

Knowles et al. (2000) examine how gender-discrete human resources influence the economy of 72 industrialized and emerging nations from 1960 to 1990, using an ordinary least square (OLS) estimation methodology. Among variables the authors considered were logarithm of years of education of boys and girls who were 15 years old or more. Using OLS and 2SLS estimation, they find that girls' education is significantly positive on the efficiency of labour. However, that of boys was not clear.  Olaniyan and Okemakinde (2008) in their study argue that "The belief that education is an engine of growth rests on the quality and quantity of education in any country. The study posits that formal education is highly instrumental and even necessary to improve the production capacity of a nation and discusses the rationality behind investment in human capital. Empirical evidence of the human capital model was identified and findings reveal that investment in education has a positive correlation with economic growth and development. Criteria for the applicability and problems associated with the theory were identified and implications for educational development were highlighted. Conclusively, the study recommends that for education to contribute significantly to economic growth and development,  it must be of high quality to meet the skill-demand needs of the economy" (p. 479).

Furthermore, it is affirmed that work arrangement in Africa is in favour of males than females (Oduro-Mensah et al., 2009). On the other hand, it is found that the ratio of females in higher institutions in Sub-Saharan Africa is only twenty-five per cent of the whole schools' admission and this is far less than the post-primary level and the latter is much lower than the primary level itself (Ajayi, Goma &Johnson 1996 in White, 1998)). Similarly, the ratio of women in the academic sector is still very low and for those in tertiary institutions, most women are in the junior cadre of administration (Duyilemi, 2007).

However, Adesina-Uthman (2018) finds that there is an inadequate number of higher educational institutions in Nigeria. She also found that Nigeria has almost twenty-seven per cent (27%) participation in high education in Nigeria when 40-50% participation in higher education is World Bank's benchmark for countries to achieve a knowledge-based economy.

From this review, it is indeed clear that studies on gender and human capital development in higher institutions in Nigeria are rare and none to the best of our knowledge employ the gender parity index (GPI) as an estimation methodology. Hence, this study fills this gap.

**2.4 Gender and Development Trends in Nigeria: Stylized Facts**

This sub-section discusses stylized facts about gender and development trends in Nigeria, in which focus was restricted to health, economy, governance and human rights, education, and Sustainable Development Goals (SDGs).

**Health**

In 2015, approximately "Sixty per cent of new HIV infections in Western and Central Africa occurred in Nigeria" (AVERT, 2016, p. 12). According to AVERT, 2016), "young women have a higher HIV prevalence and are infected earlier in life than men of the same age group. In 2013, more than 34,700 young women were infected with HIV compared to 19,900 young men" (AVERT, 2016, p.12). There is also a great occurrence of tuberculosis (TB) in Nigeria, with a range of 340,000 - 880,000 deaths recorded in 2013 (World Health Organisation, 2014). Though most TB deaths occur amongst men, it ranked among the top five killers of women in 2014 (WHO, 2015). Other stylised facts are presented in Table 1 below.

**Table 1 Health Statistics**

| | | | |
|---|---|---|---|
| "Maternal mortality rate per 100,000 live birth" | 814 | Est.2015yr | (2017yr)CIA |
| "Infant mortality rate per 1,000 live births" | 72.1 | Est.2016yr | (2017yr)CIA |
| "Infant mortality rate per 1,000 live births (male)" | 76 | Est.2016 yr | (2017yr)CIA |
| "Infant mortality rate per 1,000 live births (female)" | 66.2 | Est.2016yr | (2017yr)CIA |
| "Under-five mortality rate for males per 1,000 live births" | 114.9 | 2012yr | (2015yr)UN |
| "Under-five mortality rate for females per 1,000 live births" | 102.3 | 2012yr | (2015yr)UN |
| "Births attended by a skilled health professional" | 35 | 2014yr | (2016yr)WHO |
| "Prevalence of HIV among adults aged 15–49" | No Data | 2015yr | (2016yr)WHO |
| "Life expectancy for men" | 52.4 | Est.2016yr | (2017yr)CIA 2017 |
| "Life expectancy for women" | 54.5 | Est.2016yr est. | CIA 2017 |

Source: **UNESCO Institute of Statistics, 2017**

**Economy**

Approximately seventy per cent of Nigerians are living below the poverty line, in which females constitute 80 per cent of that group (UN Women, 2017). About 54 million women folk are living in the countryside, working predominantly in the agrarian segment (UN Women, 2017). Almost 5 years ago there were 8.9 million food-insecure people in Nigeria, with 50,000 at risk of famine

(OECD, 2017). Approximately 40,000 more Nigerians face the threat of famine, mostly in Borno State (OECD, 2017). Food and water insecurity heightens pre-existing dangers to women in affected areas, who may experience sexual abuse and exploitation, and attacks during a daily search for food and water (UNHCR, 2017). Table 2 presents male to female ratio as of 2017 followed by some stylized facts about the population categories.

**Table 2: Nigeria Population (0 -14, 15-64 and 65 and above) in Nominal Value**

| Year | Male 65+ | Female 65+ | 15-64 Male | 15-64 Female | 0-14 Male | 0-14 Female |
|---|---|---|---|---|---|---|
| 1960 | 559918 | 714196 | 12490940 | 12591837 | 9479661 | 9301906 |
| 1970 | 704166 | 879832 | 15234008 | 15307386 | 12055846 | 11800906 |
| 1980 | 915558 | 1127239 | 19579330 | 19454359 | 16415435 | 15931711 |
| 1990 | 1249143 | 1492067 | 24867991 | 24783477 | 21782785 | 21036986 |
| 2000 | 1597807 | 1844495 | 32913857 | 32610079 | 27138842 | 26178770 |
| 2010 | 2055466 | 2283516 | 42508503 | 41866034 | 35602271 | 34187408 |
| 2011 | 2126722 | 2355487 | 43586990 | 42910368 | 36653726 | 35171778 |
| 2012 | 2193073 | 2422230 | 44722769 | 44010681 | 37715289 | 36164726 |
| 2013 | 2254006 | 2484523 | 45922965 | 45173030 | 38775699 | 37155546 |
| 2014 | 2308638 | 2543209 | 47199298 | 46407093 | 39818047 | 38128616 |
| 2015 | 2356965 | 2599300 | 48556345 | 47716109 | 40832985 | 39075743 |
| 2016 | 2428051 | 2680532 | 49875428 | 48991269 | 41908409 | 40076600 |
| 2017 | 2492584 | 2757787 | 51294324 | 50360285 | 42935738 | 41032593 |
| 2018 | 2552871 | 2832408 | 52800502 | 51812204 | 43924218 | 41952536 |

**Source**: The World Bank (2019)

For ease of analysis the data in Table 2 above was transformed into total and percentages for each category as depicted in Table 3 below:

**Table 3: Nigeria Population (0-14,15 - 64 and 65 and above) in Percentage**

| Year | Total 65+ | Total 15-64 | Total 0-14 | Male 65+% | Female 65+% | Male 15-64 % | Female 15-64 % | Male 0-14 % | Female 0-14 % |
|---|---|---|---|---|---|---|---|---|---|
| 1960 | 1274114 | 25082777 | 18781567 | 43.94568 | 56.05432 | 49.79887 | 50.20113 | 50.47322 | 49.52678 |
| 1970 | 1583998 | 30541394 | 23856752 | 44.45498 | 55.54502 | 49.87987 | 50.12013 | 50.53431 | 49.46569 |
| 1980 | 2042797 | 39033689 | 32347146 | 44.81884 | 55.18116 | 50.16008 | 49.83992 | 50.74771 | 49.25229 |
| 1990 | 2741210 | 49651468 | 42819771 | 45.56904 | 54.43096 | 50.08511 | 49.91489 | 50.87086 | 49.12914 |
| 2000 | 3442302 | 65523936 | 53317612 | 46.41682 | 53.58318 | 50.23181 | 49.76819 | 50.90033 | 49.09967 |
| 2010 | 4338982 | 84374537 | 69789679 | 47.37208 | 52.62792 | 50.38072 | 49.61928 | 51.01366 | 48.98634 |
| 2011 | 4482209 | 86497358 | 71825504 | 47.44808 | 52.55192 | 50.39112 | 49.60888 | 51.03163 | 48.96837 |
| 2012 | 4615303 | 88733450 | 73880015 | 47.51742 | 52.48258 | 50.40125 | 49.59875 | 51.04938 | 48.95062 |
| 2013 | 4738529 | 91095995 | 75931245 | 47.56763 | 52.43237 | 50.41162 | 49.58838 | 51.06686 | 48.93314 |
| 2014 | 4851847 | 93606391 | 77946663 | 47.58266 | 52.41734 | 50.42316 | 49.57684 | 51.08371 | 48.91629 |
| 2015 | 4956265 | 96272454 | 79908728 | 47.55527 | 52.44473 | 50.43638 | 49.56362 | 51.09953 | 48.90047 |
| 2016 | 5108583 | 98866697 | 81985009 | 47.52885 | 52.47115 | 50.44715 | 49.55285 | 51.11716 | 48.88284 |
| 2017 | 5250371 | 1.02E+08 | 83968331 | 47.47444 | 52.52556 | 50.45942 | 49.54058 | 51.13325 | 48.86675 |
| 2018 | 5385279 | 1.05E+08 | 85876754 | 47.40462 | 52.59538 | 50.47236 | 49.52764 | 51.14797 | 48.85203 |

**Source**: Computed by Authors from the World Bank (2019).

From Table 3 above it can be seen that the ageing population (65 years and above) is dominated by females, which consistently averaged above 52% from 1960 to 2018. This indicates that women live longer than men. The same scenario played out in the youthful population (0-14 years) in which girls constituted over 50% throughout the study. This indicates that girls are more in number than boys. However, for the active population (15-64 years), males dominated and averaged over 50% throughout the study except in the sixties and seventies which were dominated by a female.

**Governance and Human Rights**

Female candidates in Nigeria fared poorly in Nigeria's general voting in 2011; 32 women were elected to national parliament out of 469 members, equating to approximately 8% representation (UNDP, 2017). A 2017 UN Women report found that merely thirty per cent of females are in managerial positions in the upper public sector. The greatest numbers of womenfolk are consigned to jobs that are not paying well and high also function in hazardous environments (UN Women, 2017).

Females in the northeastern region of Nigeria face continued instability and threats to their security. A United States Department of State human rights found (in nearly half of all the areas surveyed in the northeast of the country) incidents of rape of women and girls in their camps and communities (U.S. Department of State, 2016). There is no comprehensive law in Nigeria for combating violence against women. Rape remains widespread, as does domestic violence (U.S. Department of State, 2016). According to a UNICEF 2016 report, 25% of women in Nigeria whose age ranges from 15 to 49 years were victims of female genital injury or wounding (FGM/C) (UNICEF, 2016b). The ratio of seats that females were holding in the national assembly (2016) (World Bank, 2017) was 6%.

**Education**

The British Council report notes that as of 2014, the number of females that were out of school in the country was onethird, amounting to more than five million, five hundred girls that were supposed to attend school but didn't (British Council, 2014, p. 20). The same report indicates that Nigeria has made small advancements in general access to elementary education and that on average, females are not as likely to go to primary elementary schools as males (British Council, 2014). In the 4$^{th}$ month of 2014, 276 girl students were abducted by a radical Islamic terrorist organization(Boko Haram), from a school in Chibok province, in North-Eastern Nigeria (United Nations Secretary-General, 2015). Boko Haram remains a threat to the lives of civilians in the region and poses a particular risk to the safety and security of girls being educated in the area (UNGEI, n.d.).

According to UNESCO (2015), the number of girls that graduated from tertiary institutions in 1999 was 44.1 per cent. Also, the number of female teachers in primary school in 2010 was 48.2 per cent according to UNESCO (2015): Similarly, female teachers in post-primary schools in the same year according to UNESCO (2015) were 45.6 per cent. In addition, a female teacher in post-secondary schools in 2004 was 17.1 per cent according to UNESCO (2015).

**Table 4 Literacy and enrolment Rates**

| Items | Males (%) | Females (%) | Years |
|---|---|---|---|
| Youth (15 to24 years old). | 79.89 | 65.33 | 2015 |
| Adult above 15 years old | 69.19 | 49.68 | 2015 |
| The gross enrolment rate in primary school | 94.48 | 92.83 | 2013 |
| Gross enrolment ratio in secondary school | 57.82 | 54.48 | 2013 |
| Gross enrolment ratio in tertiary institutions | 11.76 | 18.3 | 2015 |

Source: **UNESCO Institute of Statistics, 2017**

The gender inequality in accessing higher institutions and employment in Nigeria showcases the global situation. As an international occurrence, the outcomes of the sequel survey piloted in 2000 by the Association of Commonwealth Universities has shown that females continue to be unfairly represented among teachers, lecturers and other posts (Singh, 2008). Moreover, womenfolk are continuously less-represented in higher education, contrasting the over-representation of males at primary and high schools. In addition, females are significantly less-represented in high-ranking positions in schools as in many other professions (Bush, 2006). The author states that males controlled statistically inhigh-ranking positions in all stages of

schooling with the exclusion of day nursery and pre-schools

**Sustainable Development Goals (SDGs)**
Nigeria is at present placed 141st for whole performance under the SDGs, with a median rank of 148th (SDG indicator profiles, 2016). A list of some key expected achievements under SDGs is discussed below especially on education and gender equality.

**SDG 4: Achieve universal access to affordable and quality education at all levels.** (Data retrieved from SDG indicator profiles, 2016):

- Predictable years of education (years): 9 (main challenges must be removed)
- Literacy rate of 15-24 years old (%): 66.4 (major challenges must be overcome)
- Net primary school enrolment rate (%): 63.9 (major challenges must be overcome)
- "Nigeria has signed up to a large number of education expenditure targets – for example the 23% UNESCO education target, the Abuja Declaration target of 15% on healthcare and the 10% agricultural target in the Maputo Declaration" (UNDP, 2015, p.14).

However, Nigeria's performance under these targets have suffered, which a UNDP document has deemed to be a result of "poor implementation, opaque budgets and differential responsibilities across the three tiers have hampered progress in scaling-up investments" (UNDP, 2015, p. 14).

**SDG 5: Achieve gender equality, protect and empower women, the youth and persons in vulnerable situations.**
Despite the identification of women as key stakeholders in sustainable development Nigeria's targets on the SDGs are particularly problematic about gender equality, gender presence in government, and integration of women into the labour force (UNDP, 2015). To strengthen the presence of women in government, UNDP has implemented a five-year, US$80 million initiative in Nigeria to consolidate and strengthen its democracy. As a result of the project, 2,043 female politicians and candidates have been trained in how to engage in electoral processes at the national and state levels (UNDP, 2017).
Women in National Parliaments (%): 5.6 (major challenges must be overcome)
Female years of schooling (% male): 68.8 or challenges must be overcome)
Unmet demand for contraceptives (%): 71.5 (major challenges must be overcome) (Data retrieved from SDG indicator profiles, 2016)

**SDG 5: Achieve gender equality, protect and empower women, the youth and persons in vulnerable situations.** (Data retrieved from SDG indicator profiles, 2016)
Furthermore, the identification of women as key stakeholders in sustainable development, Nigeria's targets on the SDGs are particularly problematic concerning gender equality, gender presence in government, and integration of women into the labour force (UNDP, 2015). To strengthen the presence of women in government, UNDP has implemented a five-year, US$80 million initiative in Nigeria to consolidate and strengthen its democracy. As a result of the project, 2,043 female politicians and candidates have been trained in how to engage in electoral processes at the national and state levels (UNDP, 2017).
Women in National Parliaments (%): 5.6 (major challenges must be overcome)
Female years of schooling (% male): 68.8 (major challenges must be overcome)

Female labour force participation (% male): Insufficient data
Unmet demand for contraceptives (%): 71.5 (major challenges must be overcome)

## 3.0 Methodology

### 3.1 Research Design and Sources of Data

This paper discusses gender and human capital development in Nigeria. The study applies survey research methodology with the use of questionnaires distributed to partaking tertiary institutions during a workshop on gender sensitization for tertiary institutions in Nigeria organized by the Regional Training and Research Institute for Open and Distance Learning (RETRIDAL)/ National Open University of Nigeria (NOUN) and the Commonwealth of Learning (COL), held at NOUN headquarters on 29th to 31st January 2019.The survey instrument was the number of employees and enrollment records of the higher institutions. For the sample and sampling method, 12 universities were purposively selected. For the method of data analysis, it applies the Gender Parity Index (GPI), which is calculated by dividing the female share of a variable by the male share of such a variable. "The GPI indicates parity between female and male. A GPI less than one is an indication that gender parity favours males while a GPI greater than one indicates gender parity that favours females" (UN, 2019, p.4). The closer a GPI is to one, the closer a country is to achieving equality of access between males and females"(Shannon,Im, Katzelnick, & Franco, 2013, p.8). "It is used by international organizations, particularly in measuring the progress of developing countries. The Institute for Statistics of UNESCO also uses a more general definition of GPI: for any development indicator, one can define the GPI *relative* to this indicator by dividing its value for females by its value for males" (*Koronkiewicz, 2010, p.9)*.Removing gender inequalities in human capital development would help improve the status and competencies of womenfolk.

## 4.0 Findings and Discussion of Findings

The paper applies the GPI to analyze completed questionnaires administered to participating higher institutions during a workshop on Gender Sensitization for higher institutions in Nigeria organized by RETRIAL/NOUN and the Commonwealth of Learning (COL), held at NOUN headquarters on 29th to 31st January 2019.

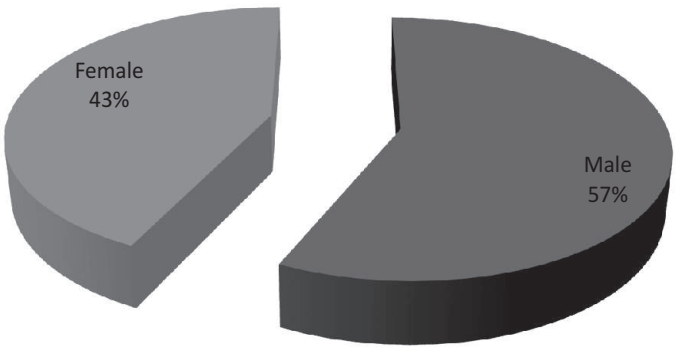
**Table1: Summary of Findings**

| S/No. | Category of Staff | Male | % (Male) | Female | % (Female) | Total | **GPI (F/M)** |
|---|---|---|---|---|---|---|---|
| 1. | Executive (e.g., Vice-Chancellor/President, Pro-Chancellor, Registrar, Finance Director, Librarian) or equivalent | 62 | 86.1111 | 10 | 13.8888 | 72 | **0.1613** |
| 2. | Administrative staff(e.g., assistant registrars, senior assistant registrars, etc.) or equivalent | 9,683 | 71.6888 | 3,824 | 28.3112 | 13,507 | **0.3949** |
| 3. | Professors | 1,264 | 83.4323 | 251 | 16.5677 | 1,515 | **0.1986** |
| 4. | Lecturers | 6,065 | 70.6300 | 2,522 | 29.3700 | 8,587 | **0.4158** |
| 5. | Undergraduate students | 358,486 | 55.7865 | 284,118 | 44.2135 | 642,604 | **0.7926** |
| 6. | Graduate students | 81,267 | 58.4798 | 57,699 | 41.5202 | 138,966 | **0.7100** |
| 7. | Support staff (e.g. Cleaners, Security) | 3,573 | 64.2049 | 1,992 | 35.7951 | 5,565 | **0.5575** |
| | **Total** | **460,400** | **56.7823** | **350.416** | **43.2177** | **810,816** | |

**Source:** Author's Computation Based on Questionnaire administered at NOUN RETRIDOL/COL Workshop on Gender Mainstreaming.

From the summary of findings in Table 1 above, it can be seen that the category of staffers and students totalled 810,816, which is made up of 460,400 males (57%) and 350,416 females (43%). This is indicative of the dominance of males in tertiary institutions and is consistent with the findings of Aina, Ogunlade, Ilesami and Afolabi (2015) but contrary to Hussar and Bailey (2011) and Sax (2008) whose studies find girls outnumbering males in enrollment in tertiary institutions. This gender separation is represented in the pie-chart below for ease of clarity.

**Figure 1: Gender Separation for Nigerian Higher Institutions**



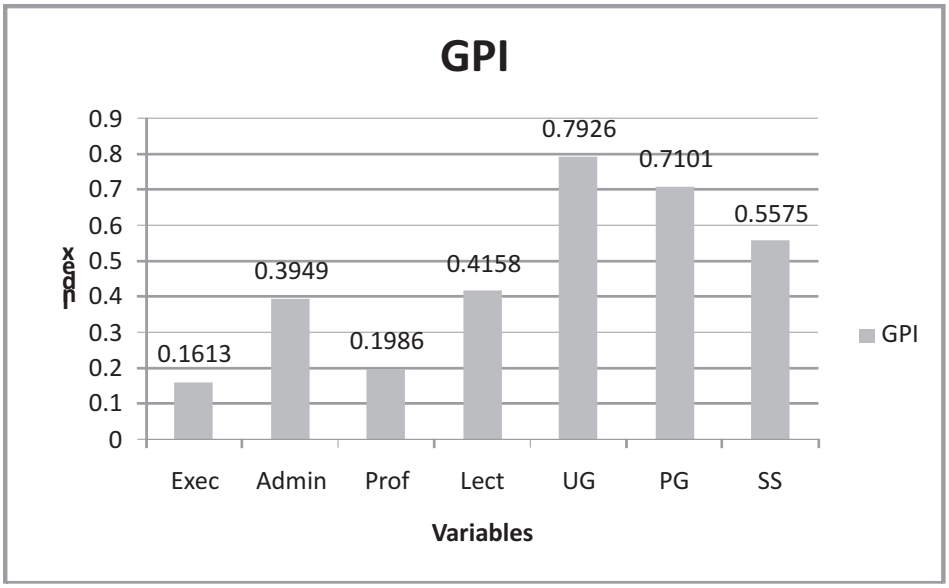

**Source:** Author's Computation Based on Questionnaire by NOUN RETRIDOL/COL Workshop on Gender Mainstreaming.

Also, from the summary of findings in Table 1 above, the value of the Gender Parity Index (GPI) is 0.1613 for Executive (e.g., Vice-Chancellor/President, Pro-Chancellor, Registrar, Finance Director, Librarian) or equivalent. This value which is less than 1 indicates a highly lopsided appointment of this cadre of staff in the Nigerian higher institutions. It means females are highly disadvantaged in Nigerian higher institutions in terms of appointment of principal officers (Vice-Chancellor/President, Pro-Chancellor Registrar, Finance Director, Librarian). Looking at the percentage distribution, it shows that 86% of the Executive cadres in the Nigerian higher institutions are males against a meagre 14% for females. Similar to this is, the value of GPI of 0.3949 for Administrative staff (e.g., assistant registrars, senior assistant registrars, etc.) or equivalent. Still, this GPI value for administrative staff although an improvement over the executive cadre's GPI, is still highly lopsided with males accounting for a whopping 72% against 28% for females. It means females are fairly disadvantaged in Nigerian higher institutions in terms of appointment of Administrative staff cadre.This is in line with Bush (2006), Singh (2008), Duyilemi (2007), and Oduro-Mensah, Biney and Ashang (2009).

In the same vein, the value of GPI for Professors is 0.1986, indicating a fairly disproportionate appointment of this cadre of staff in Nigerian higher institutions. When disaggregated at percentage level, 83% professorship in the Nigerian higher institutions is retained by a male against a female which percentage is only 17%. It means females are highly disadvantaged in Nigerian higher institutions in terms of the appointment of Professors. Likewise, the number of GPI for Lecturers is 0.4158, which is an improvement over executive, administrative and professional cadre. Yet, the GPI value is still less than 1, indicating a highly lopsided appointment of this cadre of staff in Nigerian higher institutions. It means females are highly disadvantaged in Nigerian higher institutions in terms of the appointment of Lecturers. The same scenario of disproportionate gender employment in Nigerian higher institutions played out for Support staff (e.g. Cleaners, Security) or equivalent, with a GPI of 0.5575 although this figure is an improvement on the executive, administrative, lecturer and professor's cadres. About 64% of support staff are male while 36% are female.

However, in terms of student enrollment for undergraduate programmes, the gap between males and females is closing as indicated by the GPI of 0.7926 which is approaching 1. In terms of percentage analysis, 56% of undergraduates in Nigerian higher institutions are males while 44% are females. By the same token, the value of GPI for graduate students in Nigerian higher institutions is 0.7100, quite similar to undergraduate enrollment GPI. The graduate percentage analysis shows that 58% of postgraduate enrollment is male against 42% for females. It also means that the gender gap in students' admission is closing in Nigerian higher institutions understudied. These findings where men dominate in the executive and other cadres are in tandem with the analysis of data in Table 3 in which men dominated the active population (15-64 years) from 1960 to 2018 in which the adult population averaged over 50%. The GPI is graphically analyzed with a bar chart in Figure 1 below.

**Figure 1: Gender Parity Index (GPI) for Nigerian Higher Institutions**




**Source:** Author's Computation Based on Questionnaire by NOUN RETRIDOL/COL Workshop on Gender Mainstreaming

Where,
**GPI** =Gender Parity Index
**Exec** = Executive**.**
**Admin** = Administration.
**Prof** = Professor
**Lect**= Lecturer.
**UG =** Undergraduate.
**PG** = Postgraduate.
**SS** = Support staff

From the bar chart in Figure 1 above, it can be seen that in terms of employment cadre, support staff (e.g. Cleaners, Security) has the highest gender parity index (GPI) of 0.5575, followed by lecturer cadre (0.4158), admin cadre (0.3949), and professor (0.1986). The cadre with the least GPI is Executive (e.g., Vice-Chancellor/President, Pro-Chancellor, Registrar, Finance Director, Librarian) or equivalent) with a GPI of 0.1613.

**Conclusion and Policy Recommendations**

This paper discusses gender and human capital development in Nigeria. It applies survey research methodology using the administration of questionnaires to contributing post-secondary schools. It likewise uses GPI as a method of data analysis, which is calculated by dividing the female share of a variable by the male share of such a variable. "The GPI indicates parity between females and males. A GPI of less than 1 suggests females are more disadvantaged than males and a GPI of greater than 1 suggests the other way around" (UN, 2019, p.9).Findings show a distinct gender inequality in human resources development,

socially built negative approaches towards womenfolk as professionals that hinders educational attainments and professional development for womanhood. The result by inference reveals a patriarchal system and structures that hamper women and ineffective institutional bodies responsible for gender issues such as the Ministry of Women Affairs. The paper recommends that institutions should set gender goals, stratagems and activities for gender mainstreaming in human capital development. Removing gender differences in human resources development would help to improve the standing and competencies of womenfolk in Nigeria.

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**References**

Adesina-Uthman, G.A. (2018). Higher Education and Sustainable Development for Knowledge-based Nigerian Economy, *Journal of Economics Studies, 15(1)*, 21-38.

Aina, O,I., Ogunlade, I., Ilesami, O.O., &Afolabi, C. (2015). Institutionalization of gender mainstreaming in Nigeria's tertiary. *European Scientific Journal,ESJ, 11*(10), 314-338. https://eujournal.org/index.php/esj/article/view/6541.

Almendarez, L. (2011). Human capital theory: Implications for educational development. https://www.open.uwi.edu/sites/default/files/bnccde/belize/conference/papers2010/almendarez.html

AVERT (June 2017). HIV and AIDS in Nigeria. Retrieved June 23, 2021) from https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/nigeria.

Babalola, J.B. (2003). *Budget preparation and expenditure control in education.* In: Basic Text in Educational Planning, Babalola,J.B.(Ed.). Ibadan: Awemark Industrial Printers.

Becker, G. (1962). Investment in human capital: A theoretical analysis. *Journal of Political Economy*, 70(5), 9-49.

Barro, R.J. (1996). Democracy and Growth. *Journal of Economic Growth* 1, 1-27.

Benavot, A. (1989) Education, Gender, and Economic Development: A Cross-National Study. *Sociology of Education* 62, 14-32.

Birdsall, N., Ross, D., & Sabot, R. (1997) Education, growth and inequality. In Nancy Birdsall and Frederick Z. Jaspersen (eds) *Pathways to Growth: Comparing East Asia andLatin America* (pp. 93-130). Washington DC: Johns Hopkins University Press.

Bush, T. (2006). Theories of Educational Leadership and Management3rd Edition, London; Paul Chapman Publishing Ltd. Commonwealth Higher Education. (Unpublished Seminar Paper Presented at Carnegie Gender Workshop, Ghana).

Duyilemi, A. N. (2007). Girl-child education and empowerment. Keynote Address Presented at Workshop for Senior Secondary School Female Student Teachers and Education Officers in Ondo South-West Senatorial District Okitipupa. Akure: Education Publication

CIA. (2017). The World Factbook: Country profiles. Retrieved from https://www.cia.gov/library/publications/the-world-factbook/geos/ni.html.

EU. (2012).*Structural Change in Research Institutions: Enhancing Excellence, Gender Equality and Efficiency in Research and Innovation*. DG Research and Innovation.http://ec.europa.eu/research/sciencesociety/document_library/pdf_06/structuralchanges-final-report_en.pdf.

Fagerlind, A. &Saha, L.J. (1997). *Education and National Developments*. New Delhi, Reed Educational and Professional Publishers Ltd.

HEA. (2019).*Higher education institutional staff profiles by gender*. December.https://hea.ie/assets/uploads/2020/01/Higher-Education-Institutional-Staff-Profiles-by-Gender-2019.pdf.

Knowles, S., Lorgelly, P. K.,& Owen, P. D. (2000). Are EducationalGender Gaps a Brake on Economic Development? Some Cross-Country Empirical Evidence. (Revised version of) University of Otago, Economics Discussion Paper No. 9817.

Koronkiewicz, M. (2010). *Gender Parity Index*. UNESCO Bangkok Retrieved 2008 11-26. https:// en.wikipedia.org/wiki/Gender_Parity_Index.

Lynch, K., Gummell, B.,& Devine, D. (2012). *New Managerialism in Education: Commercialization, Carelessness and Gender*. Basingstoke: Palgrave Macmillan.

Oduro-Mensah, D. O., Biney, I. K., &Ashong, G. A. (2009). Gender Issues that Impinge on Access and Equity of the Master's Programme in the Institute of Adult Education, University of Ghana. *International Journal of HigherEducation Research* (IJHER) 1(1).URI: http://ugspace.ug.edu.gh/handle/123456789/24316

OECD. (2012).*Closing the Gender Gap; Act Now!*. www. oecdbetterlifeindex. org/gender/closingthegap.htm.

OECD. (May 2017). Food and Nutrition Situation in Nigeria. No. 53. Retrieved from https://www.oecd.org/countries/nigeria/53-Food-nutrition-situation-Nigeria.pdf.

Olaniyan, D.A., &Okemakinde, T. (2008). Human Capital Theory: Implications for Educational Development. *Pakistan Journal of Social Sciences, 5(5), 479-483.* ,http://docsdrive.com/pdfs/medwelljournals/pjssci/2008/479-483.pdf

Psacharopoulos, G., &Woodhall, M. (1997). *Education for Development: An Analysis of Investment Choice*. New York: Oxford University Press.Sakamota, A., & Powers, P.A. (1995). Education and thedual labour market for Japanese men in American.*Social.Rev.*,60(2), 222-246.

Shannon, G.D., Im, D.D., Katzelnick, L., & Franco, O.H.(2013).Gender Equity and Health: Evaluating the Impact of Millennium Development Goal Three on Women's Health in South Asia. *Women & Health,* 53(3), 217-248.doi: 10.1080/03630242.2013.767300 https://doi.org/10.1080/03630242.2013.767300

Schultz, T.W.(1971).Investment in Human Capital.NewYork: TheFreePress.

Singh, J. K. S. (2008). Whispers of Change, Female Staff Numbers in Commonwealth Universities London: Association of Commonwealth Universities. South African Higher Education", *Women Studies InternationalForum*, 29 (6): 572-580.

Smith, A. (1976). *An Inquiry into the Nature and Causes of Wealth of Nations*. Chicago, IL: University of Chicago Press.

UNESCO Institute of Statistics. (2015). Education. Retrieved from http://data.uis.unesco.org UNESCO (2017). UNESCO Institute of Statistics. Retrieved from http://uis.unesco.org/.

UNData (2017). Nigeria. Retrieved from http://data.un.org/CountryProfile.aspx?crName=Nigeria#Economic.

UN (2019). Millennium Development Goals Indicators. *United Nations Metadata*

https://unstats.un.org/unsd/mdg/Metadata.aspx?IndicatorId=9

UNDP (2015). Human Development Data (1990-2015). Retrieved from http://hdr.undp.org/en/data.

UNDP (2016). Africa Human Development Report 2016: Accelerating Gender Equality and Women's Empowerment in Africa. New York, NY. Retrieved from http://www.undp.org/content/undp/en/home/librarypage/hdr/2016-africa-humandevelopment-report/.

UNICEF (2016a). "The State of the World's Children 2016." Retrieved from https://www.unicef.org/sowc/.

UNICEF (2016b). "Female Genital Mutilation/Cutting: A Global Concern." Retrieved from https://www.unicef.org/media/files/FGMC_2016_brochure_final_UNICEF_SPREAD(2).pdf.

UNGEI (n.d.). "Preparing the Girl-Child for National Development." Retrieved from http://www.ungei.org/infobycountry/nigeria_1076.html.

UNCHR (April 2017). "Nigeria, South Sudan, Somalia, and Yemen are Facing Famine or a Credible Risk of Famine." Global Protection Cluster: Drought Famine & Displacement Briefing Note. Retrieved from https://data2.unhcr.org/ar/documents/download/56257.

UNDP (2015). Nigeria's road to SDGs: Country Transition Strategy. Retrieved from http://www.ng.undp.org/content/dam/nigeria/docs/IclusiveGrwth/Nigeria%20transi tion%20strategy%20to%20SDGs.pdf.

UNDP (2017). "Nigeria: A Boost for Women's Participation in Politics." Retrieved from http://www.africa.undp.org/content/rba/en/home/ourwork/democraticgovernance-and-peacebuilding/successstories/nigeria-women-participation.html.

United Nations Secretary-General (14 April 2015). "Statement by the Secretary-General on the First Anniversary of the Abduction of Schoolgirls in Chibok, North-eastern Nigeria." New York, NY. Retrieved from https://www.un.org/sg/en/content/sg/statement/2015-04-14/statement-secretarygeneral-one-year-anniversary-abduction.

United Nations Statistics (2017). SDG Indicators. Retrieved from https://unstats.un.org/sdgs/indicators/database/?indicator=8.10.2.

United States Department of State. (2016). Nigeria 2016 Human Rights Report. Retrieved from https://www.state.gov/documents/organization/265500.pdf.

UN Women (2014). Global Database on Violence Against Women: Nigeria. Retrieved from http://evaw-global-database.unwomen.org/en/countries/africa/nigeria.

UN Women (9th March 2017). "UN Women and Development Partners in Nigeria make a Case for Women in the Work Place." Retrieved from http://africa.unwomen.org/en/news-and-events/stories/2017/03/un-women-anddevelopment-partners-in-nigeria-make-case-for-women-in-the-work-place.White, B. (1998). J.F.A. Ajayi, L.K.H. Goma and G.A. Johnson 1996. The African Experience with Higher Education. *Higher Education, 35*, 473-474.

World Bank (2017). Databank (Labour Force Participation). Retrieved from http://data.worldbank.org/indicator/SL.TLF.CACT.MA.ZS.

World Economic Forum. (2013). The Global Gender Gap Report 2013. Retrieved from http://www3.weforum.org/docs/WEF_GenderGap_Report_2013.pdf.

World Economic Forum. (2016). The Global Gender Gap Report 2016. Retrieved from http://reports.weforum.org/global-gender-gap report2016/economies/

#economy=BWA.

World Health Organisation (2014). Global Tuberculosis Report 2014. WHO/HTM/TB/2014.08, Geneva, Switzerland. Retrieved from http://www.who.int/tb/publications/global_report/gtbr14_main_text.pdf.

World Health Organisation (November 2015). Tuberculosis in Women. Retrieved from http://www.who.int/tb/publications/tb_women_factsheet_251013.pdf.

World Health Organisation (2016). World Health Statistics 2016: Monitoring Health for the SDGs. Retrieved from http://www.who.int/gho/publications/world_health_statistics/en/.

World Health Organisation (2017). Global Health Observatory Data Repository. Retrieved from http://apps.who.int/gho/data/view.main.22500?lang=en