

AN ANALYSIS OF ENROLMENT AND OUT-TURN OF SOUTH-SOUTH WOMEN OF NIGERIA IN NIGERIAN TERTIARY INSTITUTIONS

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ABSTRACT

The paper sought to investigate the enrolment and out-turn profiles of women from South-South region of Nigeria in relation to males in state tertiary institutions (colleges of education, polytechnics and universities) in Nigeria using historical data. The paper adopted comparative analytic and econometric (panel data regression) approaches. The panel data regression was used to investigate the level to which out-turns in state colleges of education, polytechnics and universities have influenced women employment in South-South region of Nigeria. Investigations revealed that, within the period under review, in state colleges of education, females enrolled more than males, however, in out-turn, males consistently outnumbered females. In state polytechnics and universities, males consistently outnumbered females in both enrolment and out-turn. The panel data results from the six states of the South-South zone of Nigeria indicated that female out-turn from the universities affect employment of women in South-South most, followed by colleges of education, and then the polytechnics. All in all, female education in South-South region of Nigeria is relatively low. This probably is attributed to many factors which include (a) married women on programmes, (b) marriage while on programme, (c) negative societal perception of female education at a higher level, and (d) fear of being enrolled on "male-dominated courses"-mathematics, physics, etc. The attendant effect of low female education is usually poor/low female human capital, which engenders low female entrepreneurial earnings, low/poor child human capital accumulation (poor child upbringing) and low female participation in politics and labour force, which result in low economic growth and development. We recommend that more women should be encouraged to enroll on programmes in tertiary institutions, more so on the so-called male's programmes. This can be done through scholarship awards by governments and individual institutions.

INTRODUCTION

The role of education in human development and social progress of nations is unrivalled. Quality education enhances quality life and paves way for wide ranging benefits to both individuals and societies. In relatively recent times, the importance of education for the advancement of women has been emphasized in several development programs. In the Beijing Platform for Action of 1995, education for the advancement of women was highlighted, in which it was identified as one of the 12 critical areas of concern and affirmed as central for gender equality and women empowerment. The Platform for Action also called for eliminating discrimination in education on the basis of gender at all levels, eradicating illiteracy among women and improving access to vocational training, science and technology and continuing education. With the adoption of the Millennium Development Goals (MDGs) in 2000, the aim of eliminating gender disparities in education was further intensified as it was essential to the goals

achievement. Goals 2 and 3 precisely emphasized girl and women education. In September 2015, the United Nations Sustainable Development Goals (UNSDGs) also highlighted the need for women education for sustainable development. This suggests that for sustainable development and gender equality to be achieved the enrolment of women in educational institutions at all levels must be taken seriously.

The aim of this work is to evaluate the enrolment and out-turn of women from the south-south zone of Nigeria in tertiary institutions (state colleges of education, polytechnics and universities) in Nigeria in relation to men with a view to analyzing the economic implications of the observed profile. The work has six sections. Following the introduction is section two, which presents the literature review. Section three presents the methods employed in the study. Data analysis is in section four, while section five presents economic implications of the observed profile. Conclusion and recommendations are in section six.

THEORETICAL LITERATURE

Human Capital Theory

The theory of human capital emphasizes that education leads to increase in productivity and efficiency of workers by increasing the level of their cognitive skills. The notion that people should invest in education is based on the fact that it will increase the stock of human capabilities which can be formed by combining innate abilities with investment in human beings (Becker, 1994; Mincer, 1993). However, the stock of human capital increases in a period only when gross national investment exceeds depreciation over time. The provision of education, therefore, is seen as a productive investment in human capital, an investment which the proponents of human capital theory consider to be more worthwhile than that in physical capital. Human capital theorists, Becker, *ibid*, Mincer, *ibid*, have established that basic literacy enhances the productivity of workers in low skill occupations, and that the higher the level of literacy of workers is, the greater the increase in national productivity. Economists have long recognized the importance of education in the development process. Smith (1937) in his famous book, *An Enquiry into the Nature and Causes of the Wealth of Nations*, as cited in Essien and Akpan (2010), emphasized the importance of education in the development process. In his concept of fixed capital for growth and development, he included acquired skills and useful abilities of all the inhabitants or members of a society. More so, 'knowledge is the most powerful engine of production', and that 'the most valuable of all capital is that invested in human beings'. Economists today lay emphasis on human capital development especially in developing countries as the global economy is becoming more of knowledge-based with almost all sectors of the economy tilting to transacting electronically.

Education, Women and Development

Education is a vital tool in the emancipation and empowerment of women. The greatest single factor which can incredibly improve the status of women in any society is education. 'Education is a powerful instrument through which national development can be attained' (FGN, 2004). The level of development of a country is largely assessed by the level and proportion of male and female education. Any country that undermines female education stands to suffer some setbacks in its development pursuit as women play crucial role in family building. It has been observed that educated women can play equally an important role as men in nation building, while uneducated women take the nation backward (Ward, Lee, Baptist and Jackson, 2010. Onwuka (2008) argued that educated women are crucial in the development of a nation while uneducated women are a drag on progress. It is therefore, imperative that when more women are educated, it would be of benefit to both the individual and the nation. Undoubtedly, education enables women not only to gain knowledge about their environment and the world but also helps them to get status, positive self-esteem, self-confidence, courage and inner strength to face challenges in life.

Educated women are better suited for participation in politics and decision making Education bestows on women a disposition for a life-long acquisition of knowledge, values, attitudes, competence and skills. It also enables women to comprehend themselves, others and the world better. It exposes women to better job opportunities, thus, increasing their disposable income; it enables women to gain access to mainstream employment sectors and also makes them to some extent better decision makers (Ochanja and Terwase, 2013). Unfortunately, due to low attainment in education in less-developed countries, many women are found more in the individual- enterprise sector and family-enterprise sector. These sectors limit women and do not challenge them to greater thinking and exploring opportunities. Limited knowledge beclouds this category of women from accepting their roles as agents of change in the society. Looking closely at many regions in the world, there is shortcomings in enrolment rates, as well as women participation in tertiary education (MDGs Report, 2013). The United Nations Human Development Report (2005) classified Nigeria as a low development country in respect of equality in educational accessibility. Female Adult Literacy Rate(ages 15 and above) for the country was 59.4% as against 74.4% for male; the combined gross enrolment of female for primary, secondary and tertiary schools in 2004 was 57% while the male was 71%.

The level of educational attainment of women generally determines the extent of their socio-economic participation. Very few women get to graduate and post-graduate levels of their educational pursuit. These levels of education also determine the level of participation of women. Studies have shown that the

higher the level of education, the better the chances of women participation in public life. Encyclopedia International (1980), states that the importance of education to economic performance can be seen in the link between the numbers of years of school completed. A study by the International Center for Research on Women confirms, that 'women are more likely to control their own destinies and effect changes in their own communities when they have higher level of education'. Asaju and Adagba (2013) gave the ratio of female to male enrolment in tertiary education in Nigeria as 43% to 57% in 2004 and 39% to 61% in 2008. This according to Ojo (2002), may be due to, women tending to go into certain professions/courses and avoiding science or the so called male-dominated profession, thus further widening the gap in women's participation in public service owing to the fact that women could be needed in these areas and would not be found. It is therefore, imperative that women lunch into all fields just like the male to bridge the gap as pointed out by Ojo (2002).

EMPIRICAL LITERATURE

Empirical evidence also abounds in the literature of the positive effects of education on national development for both more developed and less developed countries. Adedeji and Bamidele (2002), in their work 'Economic Impact of Tertiary Education on Human Capital Development in Nigeria', supported increased government investment in higher education for many reasons, one of which is that tertiary education has a large number of direct beneficial effects beyond raising economic output, such as lowering child mortality, hedging options, non-market returns and residence related benefits Awoyemi and Oyekale (2002) in their study 'The Role of Education in Non-farm Work Decision in Rural Nigeria', made an attempt to determine the probability of non-farm work decision given education. The study adopted the logit model for estimation. Investigation and conclusion was that education contributes positively to accumulation of human capital, which in turn enhances the productivity of off-farm employment opportunities of the rural dwellers. Uwatt (2002) empirically examined the impact of human capital on economic development in Nigeria using five variants of the original Solow model linking physical capital, labour and human capital proxied by total enrolment in educational system to real gross domestic product. The results showed that physical capital exerted positive and significant impact on economic development. On human capital variable, it was the component from education that was strongly and very statistically significant.

Adamu (2002) in an article, 'The Impact of Human Capital on Economic Growth in Nigeria: An Error Correction Approach', sought to examine the impact of human capital formation (investment in education) on economic growth of Nigeria from 1970-2000. The result indicated that investment in education is a

good predictor of economic growth in Nigeria. Ekpo (1987), in his work 'Health, Education and Population in Nigeria's Development Calculus: Theory and Evidence', sought to examine the importance of education in the development process of Nigeria using the ordinary Least Square (OLS) technique. He found out that education positively influences the pace and character of a country's economic development. Burneth, Marbel and Patrinos (1995) in their study of principal factors responsible for development in East Asian countries observed that the development experienced in the region is significantly explained by massive investment in education. In an attempt to investigate the effects of education on economic growth in Nigeria, Ayara (2002), in a study 'The Paradox of Education and Economic Growth in Nigeria: An Empirical Evidence', employed the Hicks-Neutral technical change and Solow's disembodied technical change methodologies. The result was that the huge investment in education has not brought about increased output and economic growth in Nigeria. Babatunde and Adelabi (2005) investigated on the long run relationship between education and economic development in Nigeria between 1970 and 2003 using Johansson co-integration technique and vector error correction methods. Their findings revealed that in the long run investment in education has positive effects on economic development.

Bakare (2006) researched into the growth implication of human capital investment in Nigeria using vector autoregressive error correction model. The study indicated that significant and functional relationship exists between investment in human capital (education) and economic growth in Nigeria. It was revealed that 1% fall in human capital investment led to 48.1% fall in the rate of growth in gross domestic output between 1970 and 2000. Adedokun (2011) in a study of human capital development and economic growth in Nigeria adopted the Ordinary Least Square (OLS) method to estimate and analyze the relationship. GDP was used as proxy for economic growth while total government expenditure on education and school enrolment were used as proxy for human capital. The results indicated a strong and positive relationship between human capital and economic growth. Following this finding, the study recommended that stakeholders in education need to adopt a more pragmatic means to develop human capital capabilities since human capital (education) is an important variable for economic growth in Nigeria.

METHODOLOGY

Methods of Analysis

In this study, two methods were used for data analysis, namely comparative analytic and econometrics (panel data regression). These methods were adopted based on the nature of data needed for the study- cross – sectional data.

Model specification and estimation

One way of examining the implications of women out-turn in tertiary institutions for economic development is by determining the effect of female out-turns on employment in South-south zone of Nigeria. The functional relationship is expressed as

$$EOW = F (OTCOE, OTPOLY, OTUNI).....(1)$$

For econometric analysis, the functional equation, that is equation (1), was transformed into a linear function as $EOW = a_0 + a_1OTCOE + a_2OTPOLY + a_3OTUNI + \epsilon..... (2)$

Where EOW is employment of women, OTCOE is female out-turn in colleges of education, OTPOLY is female out-turn in polytechnics, and OTUNI is female out-turn in universities; while a_1, a_2 and a_3 are parameters and ϵ is the error term.

Data and sources

Data for the study were historical and secondary largely drawn from National Bureau of Statistics (2014). Data required for analysis principally bordered on

- a) Male and female enrolment in colleges of education, polytechnics, and universities by state of origin in south-south zone of Nigeria, 2010 – 2013.
- b) Male and female out-turn in colleges of education, polytechnics, and universities by state of origin in south-south zone of Nigeria, 2010 – 2013, and
- c) Percentage of women participation in labour force in South-South zone of Nigeria

Estimation approach

As posited by Ojo and Oshikoya (1995), one major way of organizing panel data is by averaging the data over sub periods, and performing estimation on the entire data set. This approach was adopted by Uwatt (2003), and was employed in this study with estimation covering the period 2010 – 2013.

DATA ANALYSIS AND DISCUSSION

Enrolment and Out-turn of South-South Students in state Colleges of Education, Polytechnics, and Universities in Nigeria, 2010 - 2013

In this section, enrolment and out-turn of students by state of origin from South-South region of Nigeria in state colleges of education, polytechnics, and universities, between 2010 and 2013 are presented and analyzed with a view to examining the enrolment and out-turn of women relative to men. The South-South zone of Nigeria has six states videlicet, Akwa Ibom, Bayelsa, Cross River, Delta, Edo, and Rivers states. Table 1 presents enrolment and out-turn of students in state colleges of education by state of origin in south-south zone of Nigeria in 2010.

Table 1: Enrolment and Out-Turn of South-South students in state Colleges of Education in Nigeria, 2010

| States | ENROLMENT | | | | | OUT-TURN | | | | |
|--------------|--------------|-------------|--------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|
| | Female | % of Female | Male | % of Male | Total | Female | % of Female | Male | % of Male | Total |
| Akwalbom | 875 | 67.1 | 587 | 32.9 | 1462 | 66 | 31.7 | 119 | 68.3 | 185 |
| Bayelsa | 1703 | 62.6 | 1016 | 37.4 | 2719 | 118 | 49.0 | 123 | 51.0 | 241 |
| Cross River | 8732 | 54.3 | 4744 | 45.7 | 13476 | 841 | 53.6 | 728 | 46.4 | 1569 |
| Delta | 9595 | 66.2 | 6348 | 33.8 | 15943 | 424 | 28.4 | 1067 | 71.6 | 1491 |
| Edo | 4434 | 68.6 | 3042 | 31.4 | 7476 | 399 | 30.3 | 919 | 69.7 | 1318 |
| Rivers | 3421 | 65.4 | 1811 | 34.6 | 5232 | 113 | 54.1 | 96 | 45.9 | 209 |
| Total | 28760 | 62.1 | 17548 | 37.9 | 46308 | 1961 | 41.2 | 3052 | 58.8 | 5013 |

Source: Compiled from NBS, 2014

Akwa Ibom State in 2010 enrolled 1462 students in state colleges of education (COEs) out of which 875 (67.1 %) were females while 587 (32.9 %) were males. Students out-turn in 2010 for the state was 185, out of which 66 (31.7 %) were females while 119 (68.3 %) were males. Bayelsa state had a total enrolment of 2719 students with 1703 (62.6 %) females and 1016 (37.4 %) males. Students out-turn for Bayelsa in 2010 was 241 with 118 (49.0%) females and 123 (51.0%) males. Edo state enrolled 7476 student in 2010 in state colleges of education in Nigeria; out of which 4434 (68.6 %) were females and 3042 (31.4 %) were males. Students out-turn in state COEs in 2010 for Edo state was 1318 with 399 (30.3 %) females and 919 (69.7 %) males. From Rivers state, 5232 students enrolled in state COEs in 2010, with 3421 (65.4 %) females and 1811 (34.6%) males. Students out-turn for Rivers state in 2010 was 209 with 113 (59.1%) females and 96 (45.9 %) males. In 2010, 46,308 students from South-South zone of Nigeria enrolment in state colleges of education; out of which 28760 (62.1 %) were females, while 17548 (37.9 %) were males. Students out-turn in 2010 for the zone was 5013, out of which females were 1961 (41.2%) while males were 3052 (58.8). In 2010, 28760 females and 17548 males from South-South zone of Nigeria enrolled in state COEs in Nigeria. Thus, females exceeded males by 11, 212 (24.2 %). In out-turn, males were 3052 while females were 1961; thus, males exceeded females by 1,091 (17.6 %). In 2011, 44,565 females and 26,827 males from the six states in South-South zone enrolled in state COEs in Nigeria. In the same year, students out-turn from colleges of education for South-South zone were 1518 females and 2266 males (see Table 2). It is observed that in 2011, 17,738 (24.8%) females enrolled in excess of males. However, in out-turn, of 3784, 2266 (57.7%) were males while 1518 (42.3%) were females. Number of male graduates exceeded females' by 748 (15.4 %).

Table 2: Enrolment and Out-turn of South-South students in state Colleges of Education in Nigeria, 2011

| States | ENROLMENT | | | | | OUT-TURN | | | | |
|--------------|--------------|-------------|--------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|
| | Female | % of Female | Male | % of Male | Total | Female | % of Female | Male | % of Male | Total |
| Akwa Ibom | 3415 | 58.1 | 2464 | 41.9 | 5879 | 131 | 40.9 | 189 | 59.1 | 320 |
| Bayelsa | 1703 | 62.6 | 1016 | 37.4 | 2719 | 118 | 49.0 | 123 | 51.0 | 241 |
| Cross River | 10043 | 64.4 | 5549 | 35.6 | 6592 | 416 | 46.2 | 485 | 53.8 | 901 |
| Delta | 10646 | 59.7 | 7189 | 40.3 | 17835 | 136 | 33.1 | 275 | 66.9 | 411 |
| Edo | 10544 | 59.6 | 7162 | 40.4 | 17706 | 502 | 33.8 | 982 | 66.2 | 1484 |
| Rivers | 8214 | 70.4 | 3447 | 29.6 | 11661 | 215 | 50.6 | 212 | 49.6 | 427 |
| Total | 44565 | 62.4 | 26827 | 37.6 | 71392 | 1518 | 42.3 | 2266 | 57.7 | 3784 |

Source: Compiled from NBS, 2014

Table 3 presents enrolment and out-turn profiles of South-South students in state colleges of education in Nigeria, in 2012.

Table 3: Enrolment and Out-turn of South-South students in state Colleges of Education in Nigeria, 2012

| States | ENROLMENT | | | | | OUT-TURN | | | | |
|--------------|--------------|-------------|--------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|
| | Female | % of Female | Male | % of Male | Total | Female | % of Female | Male | % of Male | Total |
| Akwa Ibom | 3573 | 59.0 | 2482 | 41.0 | 6055 | 65 | 35.5 | 118 | 64.5 | 183 |
| Bayelsa | 1264 | 64.2 | 706 | 35.8 | 1970 | 42 | 45.7 | 50 | 54.3 | 92 |
| Cross River | 9368 | 65.6 | 4907 | 34.4 | 14275 | 489 | 50.2 | 485 | 49.8 | 974 |
| Delta | 11832 | 58.3 | 8471 | 41.7 | 20203 | 401 | 31.4 | 876 | 68.6 | 1277 |
| Edo | 9256 | 59.1 | 6402 | 40.9 | 15658 | 469 | 33.9 | 913 | 66.1 | 1382 |
| River | 2266 | 63.2 | 1323 | 36.8 | 3589 | 35 | 36.5 | 61 | 63.5 | 96 |
| Total | 37559 | 60.7 | 24289 | 39.3 | 61848 | 1501 | 37.5 | 2503 | 62.5 | 4004 |

Source: Compiled from NBS, 2014

In 2012, 6055 students from Akwa Ibom State enrolled in COEs in Nigeria. Of this, 3,573 (59.0 %) were females while 2482 (41.0 %) were males. Students out-turn from COEs for Akwa Ibom state in 2012, was 183 with 65 (35.5%) females and 118 (64.5%) males. Bayelsa state in 2012 enrolled 1970 students in state COEs. Of this, 1264 (64.2%) were females and 706 (35.8%) were males. Out-turn for the state in 2012 was 92 with 42 (45.7 %) females and 50 (54.3%) males. River state enrolled 3589 students in state COEs in 2012, with 2266 (63.2 %) females and 1323 (36.8 %) males. In the same year, Rivers state had out-turn of 96 students with 35 (36.5 %) females and 61(63.5 %) males. On the whole, in 2012, 61848 students from South-South zone of Nigeria enrolled in state COEs, with 37559 (60.7 %) females and 24289 (39.3 %) males while out-turn for the zone in 2012 was 4004 with 1501 (37.5 %) females and 2503 (62.5 %) males. We observe that in 2012, females enrolled more than males by 13, 270 (21.4 %), but in out-turn males

were more than females by 1,002 (25 %). In 2013, 59545 students in South-South zone of Nigeria enrolled in state COEs with 35875 (60.2 %) females and 23670 (39.8%) males. Number of females here exceeded that of males by 12,205 (20.5 %). Students out-turn in 2013 for the zone was 2594 with 1044 (37.4 %) females and 1550 (62.6 %) males (see Table 4). We here observed that male students out-turn was more than that of females by 506 (25.2%).

Table 4: Enrolment and Out-turn of South-South students in state Colleges of Education in Nigeria, 2013

| States | ENROLMENT | | | | | OUT-TURN | | | | |
|--------------|--------------|-------------|--------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|
| | Female | % of Female | Male | % of Male | Total | Female | % of Female | Male | % Male | Total |
| Akwai Ibom | 3811 | 57.6 | 2807 | 42.4 | 6618 | 51 | 34.5 | 97 | 65.5 | 148 |
| Bayelsa | 1299 | 64.0 | 730 | 36.0 | 2029 | 7 | 36.8 | 12 | 63.2 | 19 |
| Cross River | 9637 | 63.8 | 5477 | 36.2 | 14114 | 621 | 45.0 | 759 | 55.0 | 1380 |
| Delta | 11251 | 58.3 | 8034 | 41.7 | 19285 | 128 | 39.4 | 197 | 60.6 | 325 |
| Edo | 7433 | 58.6 | 5256 | 41.4 | 12689 | 228 | 32.7 | 469 | 67.3 | 724 |
| Rivers | 2444 | 64.1 | 1366 | 35.9 | 3810 | 9 | 36.0 | 16 | 64.0 | 25 |
| Total | 35875 | 61.1 | 23670 | 38.9 | 59545 | 1044 | 37.4 | 1550 | 62.6 | 2594 |

Source: NBS, 2014

Enrolment and Out-turn of South-South students in State Polytechnics in Nigeria, 2010 - 2013

Enrolment and out-turn of South-South students in state polytechnics in Nigeria for the period 2010 – 2013 are presented and analyzed here with a view to examining the enrolment and out-turn profiles of women relative to men.

Table 5: Enrolment and out-turn of students from South-South region in state Polytechnics in Nigeria, 2010

| STATE | ENROLMENT | | | | | OUT-TURN | | | | |
|------------|-----------|-------------|------|-----------|-------|----------|-------------|------|-----------|-------|
| | Female | % of female | Male | % of male | Total | Female | % of female | Male | % of male | Total |
| Akwai Ibom | 3415 | 48.7 | 3601 | 51.3 | 7016 | 115 | 46.9 | 130 | 53.1 | 245 |
| Bayelsa | 1703 | 45.8 | 2019 | 54.2 | 3722 | 1201 | 27.7 | 3122 | 72.3 | 4323 |
| Cross | 10043 | 52.7 | 9007 | 47.3 | 19050 | 229 | 28.2 | 583 | 71.8 | 812 |

| | | | | | | | | | | |
|--------------|--------------|-------------|--------------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|
| River | | | | | | | | | | |
| Delta | 10646 | 74.8 | 3591 | 25.2 | 14237 | 1371 | 40.4 | 2023 | 59.6 | 3394 |
| Edo | 10544 | 98.1 | 207 | 1.9 | 10751 | 878 | 39.2 | 753 | 60.8 | 1631 |
| Rivers | 8214 | 87.1 | 1215 | 12.9 | 9429 | 953 | 47.5 | 1052 | 52.5 | 2005 |
| TOTAL | 44565 | 69.4 | 19640 | 30.6 | 64205 | 4747 | 38.3 | 7663 | 61.7 | 12410 |

Source: Compiled from NBS, 2014

From Table 5, in 2010, Akwa Ibom State enrolled 7016 students in state Polytechnics in Nigeria; of which 3415 (48.7%) were females and 3601 (51.3%) were males. Out-turn for the state in 2010 was 245 students, with 115 (46.9%) females and 130 (53.1%) males. Delta state enrolled 14237 students in 2010, 10646 females (74.8 %) and 3591 (25.2 %) males. In the same year the state had student out-turn of 3394 comprising 1371 (40.4%) females and 2023 (59.6%) males. Rivers state in 2010 had enrolment of 9429 students in Nigeria State Polytechnics, consisting of 8214 (87.1%) females and 1215 (12.9%) males. The state's students out-turn in 2010 was 2005, with 953 (47.5%) females and 1052 (52.5%) males. Total enrolment of students from South-South in state polytechnics in 2010 was 64205, with 44565 (69.4%) females and 19640 (30.6%) males, while out-turn in that same year was 12410 students, with 4747 (38.3%) females and 7663 (61.7%) males. Observation here is that in enrolment, the number of females was more than that of males by 24924 (38.8 %) while in out-turn the number of males was more than that of women by 2916 (23.4 %). In 2011, Akwa Ibom state enrolled 6132 students, with 2461 (40.1%) females and 3671 (59.9%) males, in state polytechnics in Nigeria. Within the same year Akwa Ibom state had out-turn of 2759 students, out of which 1044 (37.8%) were females and 1715(62.2%) were males. For Cross River state, enrolment in polytechnics was 7364 students, 3146 (42.7%) females and 4218 (57.3%) males. Out-turn of students in polytechnic for Cross River state in 2011 was 418, with 90 (40.4%) females and 328 (59.6%) males (see Table 6).

Table 6: Enrolment and out-turn of South-South students in state Polytechnics in Nigeria, 2011

| STATE | ENROLMENT | | | | | OUT-TURN | | | | |
|--------------|--------------|-------------|--------------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|
| | Female | % of female | Male | % of male | Total | Female | % of female | Male | % of male | Total |
| Akwa Ibom | 2461 | 40.1 | 3671 | 59.9 | 6132 | 1044 | 37.8 | 1715 | 62.2 | 2759 |
| Bayelsa | 1843 | 49.4 | 1884 | 50.6 | 3723 | 637 | 34.4 | 1214 | 65.6 | 1851 |
| Cross River | 3146 | 42.7 | 4218 | 57.3 | 7364 | 900 | 40.4 | 1328 | 59.6 | 2228 |
| Delta | 3079 | 48.7 | 3244 | 51.3 | 6323 | 1750 | 54.0 | 1491 | 46.0 | 3241 |
| Edo | 381 | 38.2 | 617 | 61.8 | 998 | 516 | 39.2 | 776 | 60.8 | 1293 |
| Rivers | 2975 | 54.3 | 2507 | 45.7 | 5482 | 2079 | 51.8 | 1938 | 48.2 | 4017 |
| TOTAL | 13885 | 46.0 | 16141 | 54.0 | 30026 | 6926 | 45.0 | 8462 | 55.0 | 15389 |

Source: Compiled from NBS, 2014

Delta state in 2011 enrolled 6323 students consisting of 3097 (48.7%) females and 3244 (51.3%) males, and had an out-turn of 3241 out of which 1750 (54.0%) were females and 1491 (46.0%) were males. Total enrolment of students from South-South in state Polytechnics in Nigeria in 2011 was 30026, with 13885 (46.0%) females and 16141(54%) males, while turn-out was 15389 comprising 6926 (45%) females and 8462 (55%) males. In 2011, both in enrolment and out-turn, males were more than females. Table 7 presents enrolment and out-turns of students from South-South in State Polytechnics in Nigeria, in 2012. In 2012, 1831 Students from Akwa Ibom State enrolled in state Polytechnics. Out of this, 827 (45.2%) were females and 1004 (54.8%) males. Students out-turn for the state in 2012 was 280 with 104 (37.2%) females and 176 (62.8%) males.

Table 7: Enrolment and out-turn of South-South students in state Polytechnics in Nigeria, 2012

| STATE | ENROLMENT | | | | | OUT-TURN | | | | |
|--------------|-------------|-------------|--------------|-------------|--------------|-------------|-------------|--------------|-------------|--------------|
| | Female | %of Female | Male | % of Male | Total | Female | % of Female | Male | % of Male | Total |
| Akwa Ibom | 827 | 45.2 | 1004 | 54.8 | 1831 | 104 | 37.2 | 176 | 62.8 | 280 |
| Bayelsa | 508 | 49.4 | 520 | 50.6 | 1028 | 1040 | 33.8 | 2038 | 66.2 | 3078 |
| Cross River | 1801 | 47.6 | 1980 | 52.4 | 3781 | 1323 | 31.7 | 2860 | 68.3 | 4183 |
| Delta | 3660 | 46.3 | 4253 | 53.7 | 7913 | 2535 | 39.6 | 3871 | 60.4 | 6406 |
| Edo | 472 | 42.8 | 631 | 57.2 | 1103 | 1373 | 40.6 | 2021 | 59.4 | 3394 |
| Rivers | 2282 | 35.9 | 4066 | 64.1 | 6348 | 1994 | 38.9 | 3134 | 61.1 | 5128 |
| TOTAL | 9550 | 43.4 | 12454 | 56.6 | 22004 | 8369 | 37.0 | 14100 | 63.0 | 22469 |

Source: Compiled from NBS, 2014

Bayelsa state had 1028 students enrolled in state Polytechnics in Nigeria in 2012, with 508 (49.4%) females and 520 (50.6%) males. Out-turn in the same year for Bayelsa was 3078 consisting of 1040 (33.8%) females and 2038 (66.2%) males. Rivers state, in 2012, enrolled 6348 students composing of 2282 (35.9%) females and 4066 (64.1%) males in state polytechnics in Nigeria. Students out-turn from state Polytechnics for Rivers state in 2012 was 5128, made up of 1994 (38.9 %) females and 3134 (61.1%) males. In 2012, the six South-South states got a total enrolment of 22004 students comprising 9550 (43.4%) females and 12454 (56.6%) males in state Polytechnics in Nigeria. Out-turn was also in favour of males. Of 22469 students out-turn in 2012 for the six states in the zone; males were 14100 (63.0 %) while females were 8369 (37.0 %). Table 8 contains enrolment and out-turns of students from South-South zone of Nigeria in state Polytechnics in 2013. Students from Akwa Ibom State that enrolled in state Polytechnics in Nigeria in 2013 were 3165. Out of this, 1050 (33.2%) were females while 2115 (66.8%) were males Students out-turn for the state in 2013 was 2594 consisting of 1044 (40.2%) females and 1550 (59.8%) males.

Table 8: Enrolment and out-turn of South-South students in State Polytechnics in Nigeria, 2013

| State | ENROLMENT | | | | | OUT-TURN | | | | |
|--------------|--------------|-------------|-------------|-------------|--------------|-------------|-------------|--------------|-------------|--------------|
| | Female | % of female | Male | % of male | Total | Female | % of female | Male | % of male | Total |
| Akwa Ibom | 1050 | 33.2 | 2115 | 66.8 | 3165 | 1044 | 40.2 | 1550 | 59.8 | 2594 |
| Bayelsa | 980 | 48.9 | 1026 | 51.1 | 2006 | 399 | 31.2 | 879 | 68.8 | 1278 |
| Cross River | 1413 | 89.0 | 174 | 11.0 | 1587 | 798 | 30.5 | 1826 | 69.5 | 2624 |
| Delta | 1638 | 45.7 | 1949 | 54.3 | 3587 | 1932 | 43.2 | 2546 | 56.8 | 4478 |
| Edo | 1561 | 47.2 | 1746 | 52.8 | 3307 | 783 | 37.8 | 1289 | 62.2 | 2072 |
| Rivers | 3571 | 61.3 | 2258 | 38.7 | 5829 | 1044 | 30.5 | 2188 | 69.5 | 3232 |
| Total | 10213 | 52.4 | 9268 | 47.6 | 19481 | 6000 | 36.9 | 10278 | 63.1 | 16278 |

Source: Compiled from NBS, 2014

Students from Edo state who enrolled in state Polytechnics in Nigeria in 2013 were 3307; of this females were 1561 (47.2 %) while males were 1746 (52.8 %). Out-turn from state Polytechnics for Edo State in 2013 was 2072 comprising 1289 (62.2%) males and 783 (37.8%) females. In 2013, the six South-South states got a total enrolment of 19481 students comprising 10213 (52.4%) females and 9268 (47.6%) males in state Polytechnics in Nigeria. Out-turn, on the contrary, favoured males. Of 16278 students out-turn in 2013 for the six states in the zone; males were 10278 (63.1 %) while females were 6000 (36.9 %) (See Table 8).

Enrolment and out-turn of students from South-South in State Universities in Nigeria, 2010 – 2013

Enrolment and out-turn of students from South-south region of Nigeria in state Universities in Nigeria for the period 2010 – 2013 are presented and analyzed here with a view to examining the enrolment and out-turn profiles of females in relation to males.

Table 9: Enrolment and out-turn of South-South students in State Universities in Nigeria, 2010

| STATE | ENROLMENT | | | | | OUT-TURN | | | | |
|--------------|--------------|-------------|--------------|-------------|--------------|-------------|-------------|--------------|-------------|--------------|
| | Female | % of Female | Male | % of Male | Total | Female | % of Female | Male | % of Male | Total |
| Akwa Ibom | 5426 | 48.3 | 5816 | 51.7 | 11242 | 2753 | 48.8 | 2887 | 51.2 | 5640 |
| Bayelsa | 2285 | 40.0 | 3422 | 60.0 | 5707 | 921 | 31.3 | 2025 | 68.7 | 2946 |
| Cross River | 1709 | 41.3 | 2432 | 58.7 | 4141 | 1358 | 39.2 | 2108 | 60.8 | 3466 |
| Delta | 9023 | 46.8 | 10259 | 53.2 | 19282 | 1237 | 50.1 | 1232 | 49.9 | 2469 |
| Edo | 1930 | 43.1 | 2544 | 56.9 | 4474 | 702 | 24.4 | 2178 | 73.6 | 2880 |
| Rivers | 4322 | 40.3 | 6404 | 59.7 | 10726 | 1209 | 40.4 | 1785 | 59.6 | 2994 |
| TOTAL | 24695 | 44.4 | 30877 | 55.6 | 55572 | 8180 | 40.1 | 12215 | 59.9 | 20395 |

Source: Compiled from NBS, 2014

From Table 9, in 2010, 11242 students from Akwa Ibom State enrolled in state Universities in Nigeria. Out of this, 5426 (48.3%) were females while 25816 (51.7%) were males. Out-turn from state universities for the state in 2010 was 5640 consisting of 2357 (48.8%) females and 2887 (51.2%) males. Cross River state, in 2010 got 4141 students enrolled in state universities in Nigeria. Of this, females were 1709 (41.3%) while men were 2432 (58.7%). Out-turn from state universities for Cross River state in 2010 was of 3466 comprising of 1358 (39.2%) females and 2108 (60.8%) males. Delta state, among the South-South states, recorded the highest female enrolment and out-turns in state universities in 2010 with 9023 females 10259 males. In 2010, the six South-South states got a total enrolment of 55572 students comprising 24695 (44.4%) females and 30877 (55.6%) males state Universities in Nigeria. Number of women in out-turn was lower than that of males. Of 20395 students' out-turn in 2010 for the six states in the zone; males were 12215 (59.9%) while females were 8180 (40.1%). We observed from Table 9 that in 2010, in the six states of the South-South zone, males' enrolment exceeded females' by 6812 (11.2%) and males' out-turn exceeded females' by 4035 (19.8%). From Table 10, Akwa Ibom State, in 2011, enrolled 6834 students in state Universities in Nigeria. Out of this, 2850 (45.0%) were females while 3588 (55.0%) were males Out-turn for the state in 2011 was 1970 consisting of 1014 (51.5%) females and 956 (48.5%) males.

Table 10: Enrolment and out-turn of South-South students in State Universities in Nigeria, 2011

| STATE | ENROLMENT | | | | | OUT-TURN | | | | |
|--------------|--------------|-------------|--------------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|
| | Female | % of Female | Male | % of Male | Total | Female | % of Female | Male | % of Male | Total |
| Akwa Ibom | 2850 | 45.0 | 3588 | 55.0 | 6834 | 1014 | 51.5 | 956 | 48.5 | 1970 |
| Bayelsa | 2285 | 40.0 | 3422 | 60.0 | 5707 | 323 | 32.2 | 679 | 67.8 | 1002 |
| Cross River | 1709 | 41.3 | 2432 | 58.7 | 4141 | 1358 | 39.2 | 2108 | 60.8 | 3466 |
| Delta | 10012 | 55.4 | 8071 | 44.6 | 18083 | 698 | 45.5 | 837 | 54.5 | 1535 |
| Edo | 1926 | 46.2 | 2239 | 53.8 | 4165 | 556 | 28.2 | 1414 | 71.8 | 1970 |
| Rivers | 1841 | 42.3 | 2516 | 57.7 | 4357 | 384 | 39.9 | 579 | 60.1 | 963 |
| TOTAL | 20623 | 48.2 | 22168 | 51.8 | 42791 | 4333 | 39.7 | 6573 | 60.3 | 10906 |

Source: Compiled from NBS, 2014

Bayelsa state had 5707 students that enrolled in state universities in 2011. Females were 2285 (40.0%) and males were 3422 (60%). Out-turn for Bayelsa state in 2011 was 1002; out of which females were 323 (32.2%) while males were 679 (67.8%). River state had 4357 students that enrolled in state universities in 2011. This comprised 1841 (42.3%) females and 2516 (57.7%) males. Students' out-turn from state universities for Rivers state in 2011 was 963 composing of 384

(39.9%) females and 579 (60.1%) males. The six South-South states, in 2011, got a total enrolment of 42791 students comprising 20623 (48.2%) females and 22168 (51.8 %) males in state Universities in Nigeria. Number of males in out-turn was higher than that of females. Of 10906 students out-turn in 2011 for the six states in the zone; males were 6573 (60.3 %) while females were 4333 (39.7%). We observe from Table 10 that in 2011, in the six states of the South-South zone, males enrolment and out-turn in state universities exceeded females' by 1545 (3.6%) and 2240 (20.6 %), respectively. In 2012, from Table 11, Akwa Ibom state had 3552 students in state universities in Nigeria. Females were 1505 (42.4%) while 2047 (57.6%) were males. The state, in the same year, got students out-turn of 1023, with 487 (47.6%) females and 536 (52.4%) males. Bayelsa state enrolled 2884 students in state universities in Nigeria in 2012. Females were 1061 (36.8%) and males were 1823 (63.2%). Students out-turn from state universities for Bayelsa state in 2012 was 2526; comprising 973 (38.5 %) females and 1553 (61.5%) males.

Table 11: Enrolment and out-turn of South-South students in State Universities in Nigeria, 2012

| STATE | ENROLMENT | | | | | OUT-TURN | | | | |
|--------------|--------------|-------------|--------------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|
| | Female | % of Female | Male | % of Male | Total | Female | % of Female | Male | % of Male | Total |
| Akwa Ibom | 1505 | 42.4 | 2047 | 57.6 | 3552 | 487 | 47.6 | 536 | 52.4 | 1023 |
| Bayelsa | 1061 | 36.8 | 1823 | 63.2 | 2884 | 973 | 38.5 | 1553 | 61.5 | 2526 |
| Cross River | 1332 | 38.5 | 2126 | 61.5 | 3458 | 1119 | 40.6 | 1636 | 59.4 | 2755 |
| Delta | 11206 | 51.3 | 10625 | 48.7 | 21831 | 1534 | 44.0 | 1953 | 56.0 | 3487 |
| Edo | 2615 | 48.0 | 2830 | 52.0 | 5445 | 1128 | 38.2 | 1824 | 61.8 | 2952 |
| Rivers | 1763 | 45.3 | 2132 | 54.7 | 3895 | 1072 | 56.1 | 838 | 43.9 | 1910 |
| TOTAL | 19482 | 47.4 | 21583 | 52.6 | 41065 | 6313 | 43.0 | 8340 | 57.0 | 14653 |

Source: Compiled from NBS, 2014

In all, 41065 students from the South-South zone enrolled in state universities in Nigeria in 2012. Of this, females were 19482 (47.4%) while males were 21583 (52.6 %). Students out-turn for the zone in 2012 was 14653; made up of 6313 (43.0%) females and 8340 (57.0 %) males. From the above students' profiles, male's enrolment in state universities for South-South zone in 2012 was greater than females' by 2,101 (5.2 %). Likewise, males' out-turn in the same year was higher than females' by 2027 (14.0%). From Table 12, in 2013, Akwa Ibom state had 18904 students in state universities in Nigeria. Females were 8143 (43.1%) while males were 10761 (56.9%). The state, in the same year, got students' out-turn of 2733, with 1371 (50.2%) males and 1362 (49.8%) females. Students from Rivers that enrolled in state universities in 2013 were 17138; consisting of 8423 (49.1 %) females and 8715 (50.9 %) males. In all, South-South zone enrolled 77888 students in state universities in Nigeria in 2013. Of this, females were 32524 (47.5 %) while males

were 435911 (52.5.0 %). Students out-turn for the zone in 2013 was 15891; made up of 6863 (43.2%) females and 9028 (56.8 %) males.

Table 12: Students Enrolment and out-turn in State Universities by State of origin in South-South, Nigeria, 2013

| STATE | ENROLMENT | | | | | OUT-TURN | | | | |
|--------------|--------------|-------------|--------------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|
| | Female | % of Female | Male | % of Male | Total | Female | % of Female | Male | % of Male | Total |
| Akwa Ibom | 4072 | 43.1 | 5380 | 56.9 | 9452 | 1362 | 49.8 | 1371 | 50.2 | 2733 |
| Bayelsa | 6427 | 47.0 | 7252 | 53.0 | 13679 | 1098 | 36.7 | 1896 | 63.3 | 2994 |
| Cross River | 1073 | 36.7 | 1850 | 63.3 | 2923 | 1044 | 37.8 | 1715 | 62.2 | 2759 |
| Delta | 9241 | 49.8 | 9306 | 50.2 | 18547 | 770 | 54.3 | 647 | 45.7 | 1417 |
| Edo | 3288 | 49.1 | 3408 | 50.9 | 6696 | 1158 | 38.7 | 1836 | 61.3 | 2994 |
| Rivers | 8423 | 49.1 | 8715 | 50.9 | 17138 | 1431 | 47.8 | 1563 | 52.2 | 2994 |
| TOTAL | 32524 | 47.5 | 35911 | 52.5 | 68435 | 6863 | 43.2 | 9028 | 56.8 | 15891 |

Source: Compiled from NBS, 2014

From the above students' profiles, male's enrolment in state universities for South-South zone in 2013 was 35911 while females' was 32524 – a difference of 3387 (5 %) in favour of males. Likewise, males' out-turn for the zone in 2013 was higher than females' by 2165 (13.6 %).

Probable Factors Explaining the observed enrolment and out-turn profiles

From the foregoing analysis of South-South students enrolment and out-turn in tertiary institutions in Nigeria by state of origin and sex, we observed that in state colleges of education in Nigeria, in enrolment, females were more than males, but in out-turn, males were more than females within the period under review. In state polytechnics, females enrolled more than males in 2010 and 2012, while in 2011 and 2013, males enrolled more than females. But in out-turn, between 2010 and 2013, males were more than females. In state universities, for the period, 2010 – 2013, males were more than females both in enrolment and out-turn. On the average, between 2010 and 2013, male-students from South-South zone dominated in enrolment and in out-turn in tertiary institutions in Nigeria. Several factors probably may account for this. Some of such probable factors include:

(a) Marriage while on programme: Some female students get married while on programmes in tertiary institutions. As it is known, new marriage carries more excitement and merriments. Consequently, in some instances pregnancy would come while the married female students are on programmes. This condition may bring about more financial and moral demands which reduce concentration on academic activities and would likely lead to poor academic performance. Sometimes, the pregnant student may either suspend studies or drop from programme. Moreover, delivery may take place during examination and the now-student-mother would not be able to prepare and take the semester examinations. This also may lead to either suspension of

studies or complete drop from the programme. All these would lead to low out-turn.

- (b) ***Negative Societal perception of female education at a higher level:*** Some societies in South-South region of Nigeria may not yet place high premium on female education at a higher level. In this light, some parents, especially fathers, may see investment in female education as a venture whose dividends would be reaped by the expected husband of the female child. Thus, given this sociological setting, some fathers may not want to sponsor the female child beyond some level, say senior secondary school level. Rather, they would put more efforts in sponsoring the male child in the hope that he is the heir and the one to carry the father's name to next generation. Whereas, the female child when married, having been sponsored by the father, would drop the father's name to bear the husband's and become an asset to the husband and his family. This probable socio-economic setting may affect female enrolment in tertiary institutions negatively.
- (c) ***Married women on programmes:*** Some female students that enroll on programmes in tertiary institutions, especially in colleges of education, do so as married women and as workers. Some female student-workers enroll on programmes in tertiary institutions without official permission from their employers. The tasks of managing homes, attending to office duties so as not to be discovered and meeting academic demands may be enormous. This will reduce concentration on academic activities and will lead to poor academic performance which may prolong year of graduation (out-turn). In some cases, if the above tasks become heavier, the married-working students may place more regard on home and job, and less on school. This may lead to voluntary withdrawal; thus, a reduction in turn-out.
- (d) ***The fear of being enrolled on "male-dominated course":*** Some courses are labeled "men's courses" in tertiary institutions in Nigeria. Such courses include engineering, mathematics, physics, geology, and statistics (Ojo, 2002). Females that enroll on such programmes are usually very few. Avoidance of these courses by many females would reduce female enrolment, and consequently out-turn.

Econometric Analysis

Our linear equation as specified in section three is

$EOW = a_0 + a_1OTCOE + a_2OTPOLY + a_3OTUNI + \epsilon$. Given our method of organizing our panel data, that is, performing estimation on the entire data set, some diagnostic tests needed to be carried out.

Unit Root Test

The unit root test was conducted for the study in order to determine the order of integration of variables. This is necessary to avoid a spurious or non-sense

regression. The Levin, Lin and Chu unit root test was adopted for the study. This test was necessary in order to determine the common unit root for panel data. The result of Levin, Lin and Chu unit root test is displaced in Table 4.1.

Table 4.1: Levin, Lin and Chu unit root test

| VARIABLE | LLC STATISTICS | PROBABILITY | ORDER OF INTEGR |
|----------|----------------|-------------|-----------------|
| EOW | 1.51188 | 0.0653 | I(1) |
| OTCOE | 8.22462 | 0.0000 | I(1) |
| OTPOLY | 4.16952 | 0.0000 | I(1) |
| OTUNI | 12.1157 | 0.000 | I(1) |

Table 4.1 shows that all variables: EOW, OTCOE, OTPOLY, OTUNI were stationary at first difference. It is necessary to conduct a diagnostic test to determine which panel data estimation method will be chosen.

Diagnostic Test

The diagnostic tests adopted for the study are the Hausman test for exogeneity, Breusch Pagan LM Cross Sectional dependent test and the Jarque-Bera Normality test. The results of the test are displayed in Table 4.2.

Table 4.2: Diagnostic tests

| Hausman Test* | Cross dependence Test* | Normality Test* |
|---------------|------------------------|-----------------|
| 0.1198 | 0.1667 | 0.649365 |

* Probability figures at 5% significant level.

Table 4.2 shows the Hausman test for the exogeneity. This test was used to decide if the random effect is preferred to the fixed effect estimation. The Hausman test has p-value of 0.1198, which means that the null hypothesis is accepted since the p-value is greater than 0.05; and it was concluded that the random effect estimation is preferred to the fixed effect estimation. This makes the random effect estimation a more efficient estimation. Aside the Hausman test, the focus of the study justifies the random effect estimation method, in that it analyses the implications of female enrolment and out-turn across different entities, (COE, POLY, UNI.) on the economy via employment of women. Also the cross sectional dependent test, of the residuals across entities are not correlated. The result of the Breusch Pagan LM test (p-value = 0.1667) shows that there is no cross sectional dependence. The JarqueBera normality test shows that the variables in the model are normally distributed with the p-value of 0.649365. Having ascertained the unit root and diagnostic test, the result of the random effect estimation is displayed in Table 4.3.

Table 4.3: Result of the random effect estimation

Dependent variable = Employment of women

| Variable | Coefficient | Standard error | T-Statistics | Probability |
|----------|-------------|----------------|--------------|-------------|
| C | 5.330050 | 4.980932 | 1.070091 | 0.2973 |
| OTCOE | 0.138053 | 0.054708 | 2.523460 | 0.0202 |
| OTPOLY | 0.011854 | 0.056700 | 0.209073 | 0.8365 |
| OTUNI | 0.196611 | 0.070740 | 2.779328 | 0.0116 |

The coefficient of OTCOE is 0.138053. This shows that there is a positive relationship between out-turn of women in colleges of education and women employment in South-South Nigeria. This also shows that female graduates of colleges of education account for 13.8% of total female employed in South-South Nigeria. The coefficient of OTPOLY is 0.011854 and this shows that out-turn of females from polytechnics is positively related to female employment in South-South Nigeria. However, the contribution of out-turn of women in polytechnics to female employment is minimal - 1.2% of female graduates from polytechnics. The coefficient of OTUNI is 0.196611. This indicates that there exists a positive relationship between out-turn of females in universities and employment of women in South-South Nigeria. It also signifies that 19.7% of female employment in South-South zone of Nigeria is accounted for by female graduates from the universities. The panel data results from the six states of the South – South zone of Nigeria show that females out-turn from the universities have the highest share of employment of women in South-South Nigeria, followed by colleges of education, and then the polytechnics.

Implications for Economic Development

The observed enrolment and out-turn profiles of South-South female students in tertiary institutions in Nigeria have implications for economic development in the region and in the nation at large. Economic development, as we know, is a process of improving the quality of human lives and capabilities by raising people's level of living (Akpakpan, 2006). One major way of improving people's capabilities is through education, which imparts skills, confidence and competence. Higher education, therefore, will likely bring about improved capabilities which will in turn bring about a higher standard of living. From our investigations, out-turn of women in the three tertiary institutions (state colleges of education, polytechnics and universities) have positive relationships with women employment in the South-South region of Nigeria. This suggests that if more women would attain higher education, many women would be employed. However, the point of concern here is that in the three tertiary institutions under consideration within the period under review, enrolment of female students from South-South zone of Nigeria on the whole was low in relation to males', and males' out-turn was consistently higher than females'. This indicates that female education in South-South region of Nigeria is relatively low. The attendant

effect of low female education is usually poor/low female human capital (Umo, 1983, 2012). Human capital indubitably is very crucial in economic growth and development processes of societies and nations (Umo, 2002), and the role of women in economic growth and development is enormous and essential. It spans from the family to all sectors of the economy. When and where there is low female human capital, the attendant effects usually include low female entrepreneurial earnings (that, is low income based on low capability), low/poor child capital accumulation (poor child upbringing) and low female participation in labour force, low female participation in politics. For instance, in 2013, of 698 commissioners in the 36 states of the Federation, women were 104 (14.9 %) (NBS, 2014: 28). All in all, low female education, by the above transmission mechanisms, and more, will result in low economic growth and development.

CONCLUSION

The study sought to evaluate the enrolment and out-turn profiles of South-South female students in relation to their male counterparts in state tertiary institutions (colleges of education, polytechnics and universities) in Nigeria. Investigations revealed that, within the period under review, in state colleges of education, females enrolled more than males; however, in out-turn, males consistently outnumbered females. In state polytechnics and universities, males generally outnumbered females in both enrolment and out-turn. The low out-turn of women, in relation to males, in state tertiary institutions in Nigeria has some implications for economic development in Nigeria. These include low female human capital, which engenders low female entrepreneurial earnings (that, is low income based on low capability), low/poor child-human capital accumulation (poor child upbringing), and low female participation in labour force, low female participation in politics.

RECOMMENDATIONS

From the findings of the study, the following recommendations are offered.

- a) Women should be encouraged to enroll on the so-called male's programmes. This can be done through scholarship awards by governments at all levels and individual institutions to female students who enroll on such programmes.
- b) Workers in government employ who would want to enroll on programmes in tertiary institutions should do so under the provision of study leave. This will encourage concentration on academic activities.

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APPENDIX 1: Out-turn of Women from South-South Region in Tertiary Institutions in Nigeria and Women Employment in South-South Region (%), 2010-2013

| YEAR | STATE | OTCOE | OTPOLY | OTUNIV | EOW |
|------|-------------|-------|--------|--------|------|
| 2010 | AKWAIBOM | 31.7 | 46.9 | 48.8 | 25.5 |
| 2011 | AKWAIBOM | 40.9 | 37.8 | 51.5 | 26 |
| 2012 | AKWAIBOM | 35.5 | 37.2 | 47.6 | 25.4 |
| 2013 | AKWAIBOM | 34.5 | 40.2 | 49.8 | 25.2 |
| 2010 | CROSS RIVER | 53.6 | 28.2 | 39.2 | 22 |
| 2011 | CROSS RIVER | 46.2 | 40.4 | 39.2 | 24.1 |
| 2012 | CROSS RIVER | 50.2 | 31.7 | 40.6 | 23.6 |
| 2013 | CROSS RIVER | 45.0 | 30.5 | 37.8 | 26.5 |
| 2010 | RIVERS | 54.1 | 47.5 | 40.4 | 20.6 |
| 2011 | RIVERS | 50.6 | 51.8 | 39.9 | 15.6 |
| 2012 | RIVERS | 36.5 | 38.9 | 56.1 | 16.2 |
| 2013 | RIVERS | 36.0 | 30.5 | 47.8 | 22.4 |
| 2010 | DELTA | 28.4 | 40.4 | 50.1 | 27.7 |
| 2011 | DELTA | 33.1 | 54 | 45.5 | 25.6 |
| 2012 | DELTA | 31.4 | 39.6 | 44 | 26.8 |
| 2013 | DELTA | 39.4 | 43.2 | 54.3 | 30 |
| 2010 | EDO | 30.3 | 39.2 | 24.4 | 17.6 |
| 2011 | EDO | 33.8 | 39.2 | 28.2 | 18 |
| 2012 | EDO | 33.9 | 40.6 | 38.2 | 18.5 |
| 2013 | EDO | 32.7 | 37.8 | 38.7 | 19.6 |
| 2010 | BAYELSA | 49.0 | 27.7 | 31.3 | 19.7 |
| 2011 | BAYELSA | 49.0 | 34.4 | 32.2 | 19.1 |
| 2012 | BAYELSA | 45.7 | 33.8 | 38.5 | 19.5 |
| 2013 | BAYELSA | 36.8 | 31.2 | 36.7 | 18.5 |

Source: NBS Statistics on Men and Women in Nigeria, 2014