Socio-economic status and tertiary academic performance in Enugu State, Nigeria

Ambrose Nnaemeka Omeje, Ogochukwu Christiana Anyanwu*, Augustine Jideofor Mba and Michael Okike Ugwu

Department of Economics,
University of Nigeria,
Nsukka, Nigeria
Email: ambrose.omeje@unn.edu.ng
Email: ogochukwu.anyanwu@unn.edu.ng
Email: mba.augustine@unn.edu.ng
Email: okike.ugwu@unn.edu.ng
*Corresponding author

Abstract: This study examined socio-economic status and tertiary academic performance in Enugu State, Nigeria. The study utilised propensity score matching model and survey data generated from 468 questionnaires distributed among student in 13 higher institutions in the state. It was found that students' academic performances would significantly decrease with low socio-economic status. Further, low socio-economic status has negative significant impact on students' academic performance. Hence, with low socio-economic status, academic performance of students in tertiary institutions in Enugu State decreases by about 62.5% but will rise by about 37.5% if the student were to be in the upper echelon of the socio-economic strata (middle and high). The study recommended among others that there is need for the government, non-governmental organisations, and other philanthropist to provide education fund concessions such as scholarships, bursary awards, and other special education interventions funds to students from poor background.

Keywords: socio-economic status; tertiary institutions; academic performance; students; propensity score matching; methodology; cumulative gross point average; education; Enugu State; Nigeria.

Biographical notes: Ambrose Nnaemeka Omeje is currently a Lecturer and a Doctoral student at the Department of Economics, University of Nigeria, Nsukka. He has published many papers in both international and local peer-reviewed journals and a number of conference papers. He has also undertaken research and consultancy for SAVI-DFID, UNICEF and was an Assistant Facilitator for Central Bank of Nigeria – South-East Entrepreneurship Development Centre (SEEDC) Training on Entrepreneurship and Development, Nigeria. He has also consulted for Fignor Fihadi Foundation and

represented it in the Cross River State Monitoring and Evaluation Team (SMET) that Monitored and Evaluated the 2011, 2012, and 2013 MDGs-DRGs Projects and Programmes in Nigeria for the Office of the Senior Special Assistant to the President on MDGs (OSSAP – MDGs). His research interests span across development economics, financial economics, econometrics, environmental economics, entrepreneurships, micro- and macro- economics.

Ogochukwu Christiana Anyanwu is a Doctoral student and also a Lecturer at the Department of Economics, University of Nigeria, Nsukka. She holds Bachelor of Science and Master of Science in Economics. She has published papers in reputable peer-reviewed local and international impact factor journals. She has also attended and presented papers in many local and international conferences. Her research interests are macroeconomics, econometrics, development, education and energy economics. Currently, she focuses her writings on women and children. She loves researching and reading, but when not researching and reading, she enjoys listening to music, surfing the internet, watching documentaries and movies.

Augustine Jideofor Mba is currently a Lecturer II in the Department of Economics, University of Nigeria, Nsukka. Before his appointment into the University of Nigeria, he worked with Eco Bank plc formerly Oceanic Bank plc in the Department of risk and credit facilities. He has also taught in Department of Cooperative Economics, Wisdom Polytechnic, Nsukka, Enugu State. He has published widely in both local and international journals. He has also attended many local and international conferences. His research interests span across public sector economics, financial economics and public finance. He is currently doing his Doctoral programme in Public Finance in the Department of Economics, University of Nigeria, Nsukka.

Michael Okike Ugwu is a Lecturer in the Department of Economics, University of Nigeria Nsukka and has authored many articles in both peer-reviewed local and international journals. He has attended many local and international conferences and presented papers. He is currently a Doctoral student in the Department of Economics, University of Nigeria, Nsukka. He is also an instructor to undergraduate students on practical Econometrics using different econometric softwares (STATA, E-views, and SPSS). He is a member of Nigerian Economic Society (NES) and Nigeria Institute of Management (NIM). He is also the CEO Bounty BDC Lagos, Nigeria. He plays football as part of his extra curriculum activities.

1   Introduction

The best legacy a nation can give to her citizen is education. This is because the educational attainment of her citizenry and the quality of a nation's education determines the developmental strides of the nation. In Nigeria, education does not only provide knowledge and skills but also inculcates values, training of instincts and fostering right attitudes and habits to students (Ovansa, 2017). In Nigeria and Enugu State in particular, education is considered a first step for every human activity in this era of globalisation (Abdu-Raheem, 2015; Usman et al., 2016; Farooq et al., 2011). Educating children start very early at their young stage in the family. Parents are the first teachers of children before their formal education in schools (Singh and Vyast, 2014; Amadi and Segun, 2018).

Therefore, students with parents of low socio-economic status are automatically first educated by their parents at that very tender stage of life. Due to the low socio-economic constraints of the parents, the student may face some challenges that may affect his/her personality which may deter him/her from being knowledgeable, competent, capable and skilful thereby, frustrating his efforts towards a better academic achievement (Eshetu, 2015).

Studies have shown that children from families with high and middle socio-economic status are better exposed to a learning environment at home because of provision and availability of extra learning facilities while children from low socio-economic status face a lot of difficulties in a bid to attain the top of their educational ladder (Ahmar and Anwar, 2013; Chandra and Azimuddin, 2013; Ovansa, 2017). This is because, students from lower socio-economic status often face additional challenges including lack of learning resources, difficult learning conditions and poor motivations of all sorts, all of which affect their academic performance.

Students from a low socio-economic status often struggle with providing academic support for themselves, especially through menial jobs. As a result of this, they have limited time to study well, have limited financial capability to eat balanced diet for good understanding of what they are studying and for brain enhancement that will help them have retentive memory. Students from low socio-economic status also face emotional problems due to lack of meeting up with tuition fees, hostel fees, text books, exercise books, and other learning materials that will aid their better performance academically (Usman et al., 2016).

Due generally to inadequate financial resources, families and/or sponsors of these students with low socio-economic status find it difficult to create adequate and/or favourable learning environment for these students both at home and in school. Lack of a favourable learning environment at home and in school could negatively affect students' academic achievement in school (Muriungi, 2017). It is against this backdrop that this study examines the impact of low socio-economic status on students' academic performance in Nigeria using tertiary institutions in Enugu State as a case study.

2   Overview of some selected indicators of socio-economic status in Enugu State

There are a lot of indicators of socio-economic status but due to limited data as published by National Bureau of Statistics (NBS) (2014, 2016) with respect to Enugu State, Nigeria, this study has to show selected indicators of socio-economic status in Enugu State with limited number of years. For instance, there was no data for Figure 2 (total enrolments into Nigerian tertiary institutions by the people of Enugu State) up to 2015. Therefore, the study presents some of the selected indicators of socio-economic status in Enugu State as shown in Figure 1.

Figure 1 shows that while household size remained approximately stable, between four and five persons per household on the average, unemployment rate in Enugu State remained very high across years (above 15% reaching 28% in 2010), except for 1999, 2007, 2008 and 2009 where it remained below 15%. The reason for the low

unemployment rate in these periods may be attributed to improvements in the economy and/or economic activities within these periods.

Figure 1   Unemployment rate and household size in Enugu State, Nigeria (see online version for colours)
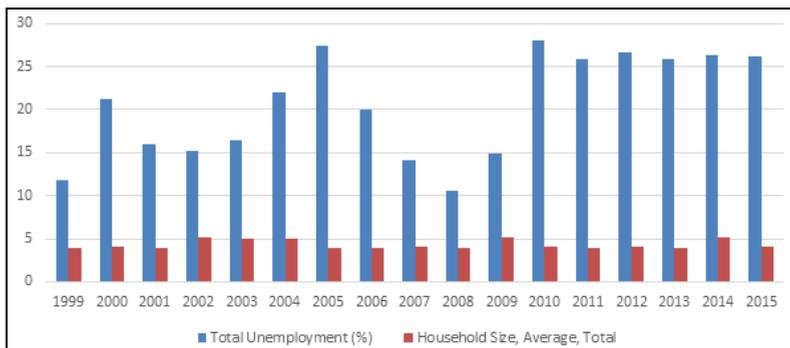
    Source: National Bureau of Statistics (NBS) (2016)

As a result of the high unemployment rate, total enrolments into Nigerian tertiary institutions by the people of Enugu State remained very low as can be seen in Figure 2.

Figure 2   Total enrolments into Nigerian tertiary institutions by the people of Enugu State, Nigeria (see online version for colours)
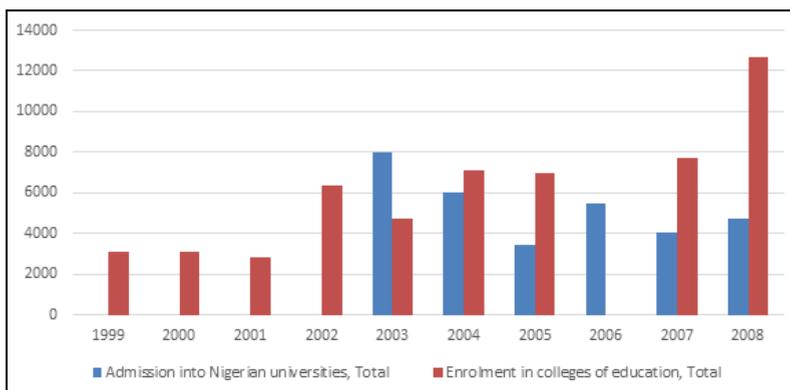
    Source: National Bureau of Statistics (NBS) (2016)

There were no available data for admissions into Nigerian universities by the people of Enugu State between 1999 and 2002. However, Figure 2 indicates that total admissions into Nigerian universities by the people of Enugu State remained very poor compared to their enrolments in colleges of education between 2003 and 2008. This may be attributed to the inability of parents and/or sponsors of students from Enugu State to send their children to universities due to low socio-economic status. Hence, they can afford to send their children to colleges of education which is considered to be relatively cheaper compared to universities.

3   Literature review

The literature review of this study is divided into two, namely; the theoretical and the empirical literature. These can be looked at in the preceding subsections.

3.1   *Theoretical literature*

3.1.1   *Education and training theory*

Becker (1993) and Schultz (1963) are the most prominent proponents of this theory on why individuals acquire education and training. The theory posits that individuals seek to increase their amount of human capital in order to earn higher returns in labour markets. Individuals do this primarily through investing in education, seeking to acquire skills or credentials that increase their productivity and lead to greater labour market rewards. The theory of human capital is akin to the theory of production among firms; just as firms invest in capital (financial and physical) in order to maximise output, individuals invest in human capital in order to maximise their output. Since the potential rate of return on an investment depends on its initial price, the decision to attend tertiary institution is also constrained by cost of its acquisition. Therefore, choice of the tertiary institution by a student from low socio-economic to attend is constrained by the price charged by the institution per student.

3.1.2   *Theories relating to socio-economic status and academic performance*

Socio-economic status is typically broken into three levels (high, middle and low) which is used to describe the three echelon which a family or an individual may fall into. When placing a family or individual into one of these categories, any or all of the three variables (income, education, and occupation) can be assessed.

Therefore, according to functionalist theory of socio-economic status and academic performance, everybody, regardless of socio-economic origin, should be allowed to achieve high socio-economic status, given that they devote the necessary effort (Collins, 1971). This theory was supported by the notion of the 'American dream' which suggests that anyone in America can rise from the bottom of the socio-economic spectrum to the top, provided that they work hard enough (Ravitch, 2010). This path of social mobility typically revolves around the education system, where effort and high academic performance/achievement are thought to provide substantial rewards to the student.

For the theory, extra years of schooling or the attendance of an elite school would provide new, valuable skills that promote better life outcomes. However, if all students are given an equal opportunity to attend high-quality schools, all of them should be able to attain high socio-economic status. This does, of course, require the individual students to contribute the necessary effort towards his/her academic performance (Doren, 2013; Okioga, 2013). But where there are limited number of those in the upper echelon of the socio-economic strata, students who had worked the hardest and academically had performed the highest among the others would be allow to attain the upper strata of the society. Socio-economic status here is thus determined by merit, as opposed to external factors, such as socio-economic origin, that may otherwise give an unfair advantage to some individual students. This means that if students could not find him/herself in the upper echelon of the socio-economic class, it is simply due to their personal failure to

perform well in order to attain that class, be it related to intellect or cultural disposition (Ravitch, 2010; Doren, 2013).

In addition, from the conflict theory of socio-economic status perspective, those who rise from rags to riches are simply outliers (that is, those moving from low socio-economic status to middle or high low socio-economic status). The conflict theory therefore posits that it is instead far more common to attain the socio-economic status held by one's parents rather than one that is attained through effort alone (Bowles and Gintis, 1976; Doren, 2013). It is a known fact that hard work contribute significantly towards improving one's socio-economic status however, the conflict theory suggests that schools actually play a role in preventing socio-economic status mobility (that is for those in low socio-economic status).

3.2   *Empirical literature*

Using a sample size of 380 students selected from five public and private schools, Aliyu (2016) estimated the influence of family socio-economic status on academic achievement of senior secondary school students in Nasarrawa zonal education area of Kano State. The result of the study showed a strong relationship between family socio-economic background and academic achievement of senior secondary students of the area under study. However, the study noted that there is an exceptional case where by children from poor family background performed academically better than those form rich background. Therefore, it was recommended that all stakeholders of education must join hands together financially, to bridge the gap between the two classes.

Discussing the impact of socio-economic status and its relation to academic achievement of higher secondary school students, Ahmar and Anwar (2013) selected a sample size of 200 students made up of 102 males and 98 females from five different colleges of Lucknow, Uttar Oradesh, India. The result showed that males with higher socio-economic status scored high academic achievement in comparison with males with low socio-economic status which is because their parents provided all the necessary facilities regarding their children's education, health and also understands problems associated with adolescent period which affect their academic achievement. The study recommends that further study should be carried out to all schools in India since their study only covered colleges of Lucknow, Uttar Oradesh.

Eshetu (2015) using a survey of 538 students randomly selected from 13 junior secondary schools, discussed the impact of effect of parents socio-economic status on the academic achievement of students in Dessie Town, Ethopia. Results of the survey showed a significant relationship between parental socio-economic conditions and academic achievements of the children in the town. Occupational status of parents, the educational level of parents, being a single parent or not and whether both families are alive or not are important family conditions that have significant role in the determination of educational achievement of students. The study therefore recommended that to achieve reliable result on the relation of student's achievements and SES of parents, further study with wider geographical area and including other variables should be undertaken.

Furthermore, Usman et al. (2016) analysed parental socio-economic status and student's academic performance in Nigeria. A sample of 80 students was randomly selected from four senior secondary schools in Kano State. The result showed that parental socio-economic status influences academic performance of students. The study recommended that counselling services should be provided for parents on the best way to

cater for their children academically and financially in order to achieve their educational goals.

Also, Abdu-Raheem (2015) adopted descriptive statistics design of survey type to discuss the effects of parents' socio-economic status as predictor of secondary school student's academic performance in Ekiti State, Nigeria. Sample of 900 students was selected from 20 secondary schools. The result found out that there is a significant relationship between family size and student's academic performance. Also, parent's background, qualification and level of income have a strong relationship between parent's socio-economic status and academic performance of secondary schools in Ekiti State. The study recommended that parents with low educational background should endeavour to send their children to after school lessons and holiday classes in order to improve the student's academic performance. Also maximum financial support should be provided to students to enhance their performance in school.

Using a sample size of 450 students selected from 15 schools, Singh and Choudhary (2015) analysed the impact of socio-economic status on academic achievement of school students. A sample of 450 students was selected from 15 schools. The students were categorised into high, middle and low SES and the result showed that difference in status is responsible for the poor academic performance among adolescents. The study recommended that students of low socio-economic status should be financially empowered and scholarships should be provided.

Muriungi (2017) discussed the impact of socio-economic status on students performance in the urban slums of Laikipia County, Kenya. Target population of 1,381 with a sample of 56 pupils, 24 teachers, one head teacher and 50 parents participated in the study. The study showed that families with low socio-economic status struggle with providing academic support for their children. Also, negative environmental factors like drug abuse, early sexual involvement negated any meaningful pedagogic gains. Academic level of parents was correlated to the pupils learning outcomes.

Ovansa (2017) investigated the effects of socio-economic background of senior secondary students on their academic performance in Adazi LGA of Kogi State using a sample size of 40 students selected from five schools totalling 200 students. The study showed that the impact of socio-economic status on academic performance of student cannot be overemphasised. The study revealed that high level of educated parent, occupation of parents, parents' annual income influence student's academic performance. The study recommended that parents with high socio-economic status should provide educational assistance to children from families with low socio-economic status.

Amoo et al. (2018) discussed the perceived effects of parental socio-economic status on student's academic performance, among teachers in Odeda local government area of Ondo State. Two hundred teachers were randomly selected from five public and private schools. They find that parental socio-economic status, educational level and family size may have significant relationship with student academic performance.

Henrietta and Odozi (2014) discussed the influence of parental socio-economic status on academic achievement of students in selected schools in Enugu State, Nigeria. Male and female students selected from three senior secondary schools constituted the population of the study. Their research finding showed that parental socio-economic status and parental educational background have no significant effect on academic performance of students while parental educational qualification and health status of students have statistical significant effect on academic performance of students. They

noted that parental qualification and student health statuses significantly influence student's academic performance.

Ogunshola and Adewale (2012) analysed the effects of parental socio-economic status on academic performance of students in Kwara State, Nigeria. Randomly selected from three senior secondary schools were 60 students. The results showed that parental socio-economic status has no significant effect on academic performance of students. Also, parental educational background has no significant effect on student's academic performance. However, performance of students to parental qualification and student health status revealed statistical significant factors that affect the students' academic performance. This is because the two variables indicate the nature of home environment of the students. The study revealed that social and economic policies should be put in place by the government to enable children from parents of low socio-economic status to have equal opportunity of advancing the cause of education of their children.

Furthermore, Ghaemi and Yazdanpanah (2014) utilised a sample of 120 students generated from demographic questionnaire to study the effects of socio-economic status and academic achievement of students in the National University of Rafsanjan. The result of the study showed a negative relationship between socio-economic status and academic achievement among university junior students. It was recommended among others that further studies on the relationship between socio-economic status and educational achievements of students should be carried out on students at other years of their academic education to create the stronger possibility of generalising the results.

Singh and Vyast (2014) studied the influence of socio-economic status of parents and academic achievement of students in selected primary schools of Meerut District of Uttar Pradish. Ninety students studying in three primary and two private schools were taken as sample. Their result showed that the socio-economic status of parents does not have significant effect on the educational achievement of students. The study also found that educational level of parent and students health status are the most significant factors that influence the academic achievement of students and also their adjustment in the society.

4   The study area

Enugu State, South-East of Nigeria, is one of the 36 states constituting the Nigerian Federation. It came into being on 27 August 1991 when the administration of President Ibrahim Babangida finally acquiesced to the long agitations of Waawa people for a State they could truly call their own. Enugu State derives its name from the capital city, ENUGU (top of the hill) which is regarded as the oldest urban area in the Igbo speaking area of Southeast Nigeria. The city owes its geopolitical significance to the discovery of coal in 1909 by a team of British geologists. The discovery of the solid mineral in the area brought about the emergence of a permanent cosmopolitan settlement which influenced the construction of a railway line to link the Enugu coal fields with the sea port in Port Harcourt for the export of the mineral. The state shares borders with Abia State and Imo State to the south, Ebonyi State to the east, Benue State to the northeast, Kogi State to the northwest and Anambra State to the west. Enugu, the capital city of Enugu State, is approximately 2 1/2 driving hours away from Port-Harcourt, where coal shipments exited Nigeria. Enugu is also located within an hour's drive from Onitsha, one of the biggest commercial cities in Africa and 2 hours drive from Aba, another very large commercial city, both of which are trading centres in Nigeria (Omeje and Abugu, 2015).

It has 17 local government areas (LGAs); Aninri, Awgu, Enugu East, Enugu North, Enugu South, Ezeagu, Igbo-Etiti, Igbo-Eze North, Igbo-Eze South, Isi-uzo, Nkanu East, Nkanu West, Nsukka, Oji-River, Udenu, Udi and Uzo-uwani. It hosts many tertiary institutions some of which include: Enugu State University of Science and Technology, Caritas University, Renaissance University, Godfery Okoye University, University of Nigeria (both at Nsukka and Enugu campuses), Institute of Management Technology, Our Saviour Institute of Science Agriculture and Technology (OSISATECH), Enugu; Enugu State Polytechnic, Iwolo, Federal collage of Education Eha-Amufu; Enugu State Collage of Education Technical; The Collage of Education, Nsukka (Omeje and Abugu, 2015), and more recently Coal City University.

5   Data and methodology

The data used in this study is a survey data generated from 468 questionnaires which were administered to students of tertiary learning in both rural and urban locations in Enugu State, Nigeria. The study concentrated on tertiary institutions in Enugu State, Nigeria. For practical purposes, the entire tertiary institution in Enugu State was considered, from which the study drew a simple random sampling of students after applying the multi-stage random sampling technique. A total of 13 tertiary institutions were visited with the consideration of two public universities in three locations (University of Nigeria, Enugu Campus; University of Nigeria, Nsukka; and Enugu State University of Science and Technology), four private universities (Caritas University, Godfrey Okoye University, Renaissance University and Coal City University), two public and one private colleges of education (Federal College of Education Eha-Amufu; Enugu State College of Education Technical; and The College of Education, Nsukka), and two public and one private polytechnics (Institute of Management and Technology, Enugu; Enugu State Polytechnic, Iwolo; and Our Saviour Institute of Science Agriculture and Technology (OSISATECH)). Four locations in each of the 13 tertiary institutions were visited out of which, nine students were randomly selected from each of the selected location thereby, summing up to 36 students in each institution hence, making it a total of 468 students interviewed in all. Therefore, a total of 468 tertiary institution-based questionnaires which gave consistent reports were administered and collected from students of higher learning and were used for analyses. The choice of these data is due to the fact that, unlike other surveys carried out previously, the questionnaires designed by this study, provided more complete information about the variables used in the estimation (Omeje and Abugu, 2015).

6   Model specification

The coefficients that are produced in the probit model are used to calculate a propensity score for each student, which reflects each student's probability of academic performance due to possession of a scholarship. Therefore, the propensity score matching is thus used to estimate the average treatment on the treated. Propensity score matching is a technique used for non-experimental data to identify a control group that exhibits the same distribution of covariates as the treatment group. In this study, it is however, used to

verify whether the possession of scholarships by students increases their chances of performing well in their academics. Propensity score matching is often used by statisticians and is becoming increasingly popular among economists as a method to measure the impact of training programs (Anand et al., 2006). Consequently, this study utilises this methodology to estimate the impact of scholarships on students' academic performance using tertiary institutions in Enugu State, Nigeria as a case study.

Following Rosenbaum and Rubin (1983), an alternative to matching based on student's characteristics (X) is to use the propensity score PS), which they define as "the conditional probability of assignment to a particular treatment given a vector of covariates". Rosenbaum and Rubin (1983) argued that if the matched observations have homogenous propensity scores, then they will also have the same distribution of X. Hence, let the propensity score be denoted as:

$$PS(X) = Pr(D = 1|X) \tag{1}$$

where PS(X) is the propensity score, Pr is the probability, D is the treatment variable, while X is a vector of covariates.

In situations in which PS(X) is not known (which is almost always the case for non-randomised experiments), it can be estimated by models such as the probit or logit. Given the students' academic performances (that is whether they are performing well or not), the study thus calculated PS using the probit model. For equation (1) to hold, there are some underlying assumptions of the propensity score matching model. These are:

1   The 'strong ignorability' assumption, as noted by Rosenbaum and Rubin (1983), emphasises the existence of:

   a   The assumption of statistical independence of (A_0, A_1) and D conditional on X. This can be given statistically as follows:

   $$(A_0, A_1) \perp D|X \tag{2}$$

   where A_0 is the score of students' academic performance being low and A_1 is the score of students' academic performance being high. D denotes group with low socio-economic status (the outcome variable), while X is a vector of covariates which included: religion, household size, sector, sex, age of respondents, marital status, occupation of household head, average expenditure of respondents, type of secondary school attended by the respondent, parents level of education, choice of course, post university mandatory tertiary examination (PUMTE) score, average number of hours the respondent study's per day.

   b   The assumption that PS(X) lies between 0 and 1. Here, it is assumed that if PS equals 1, it implies that students with socio-economic status always perform very high in their academics hence; there is no match with those whose academics performances are low. The same logic applies if PS(X) equals 0. This can be given statistically as:

   $$0 < P(X) < 1 \tag{3}$$

2   The assumption posits that the unobserved characteristics that are captured by the error term, μ_0, have the same distribution regardless of whether the student is in the treatment or control group. This can be stated in equation (4) below:

$$E\left(\mu_0 \mid D = 1, \, PS(X)\right) = E\left(\mu_0 \mid D = 0, \, PS(X)\right) \tag{4}$$

However, this assumption does not mean that $E(\mu_0 \mid PS(X)) = 0$; rather, it assumes that the distribution of the unobservable is the same for the treatment and control groups (Heckman et al., 1997; Omeje and Abugu, 2015).

7   Results and findings

In trying to present the results and findings, this study first looks at the academic performance of students and then, the percentage distribution of the impact of low socio-economic status on the academic performance of students in tertiary institutions in Enugu State, Nigeria. The cumulative gross point average (CGPA) was used as a proxy for student's academic performance as seen in Figure 3.

Figure 3   Proportion of student's CGPA (%) (see online version for colours)
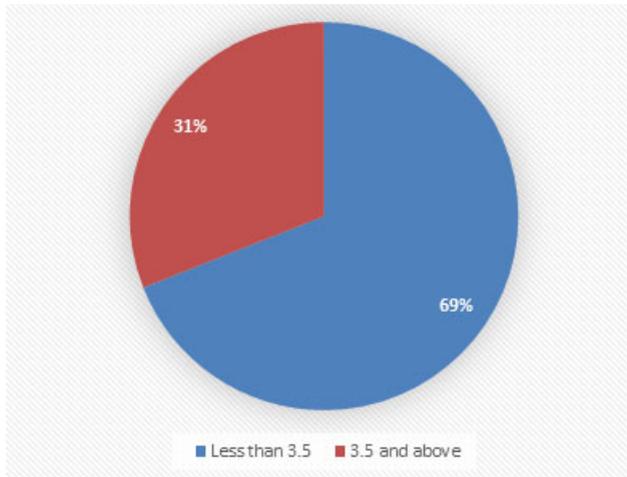
Source: Author's computation from the existing data

Figure 3 shows the proportion of academic performance (CGPA) of students in tertiary institutions in Enugu state, Nigeria. The figure suggests that the proportion of students who score less than 3.5 as their cumulative gross point average (CGPA) is 69% while those who score 3.5 and above is 31%.

Figures 4 and 5 show the distribution and the percentage distribution of the impact of low socio-economic status on the academic performance of students in tertiary institutions in Enugu State, Nigeria. The figures suggest that out of 468 respondents, 299 (17%) strongly agreed that students in low socio-economic status do not perform well in their academics, 398 (22%) strongly agreed that low socio-economic status makes students not to study always, 338 (19%) strongly agreed that low socio-economic status creates poor opportunities among students, 378 (21%) strongly agreed that low socio-economic status discourages students from studying, and 387 (21%) strongly agreed that low socio-economic status creates emotional problems to students of tertiary institutions in Enugu State, Nigeria.

Figure 4   Distribution of the impact of low socio-economic status on students academic performance (see online version for colours)
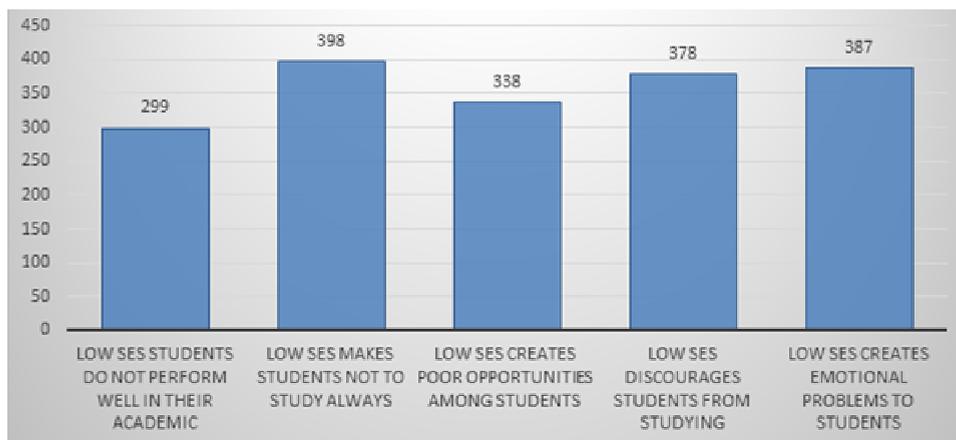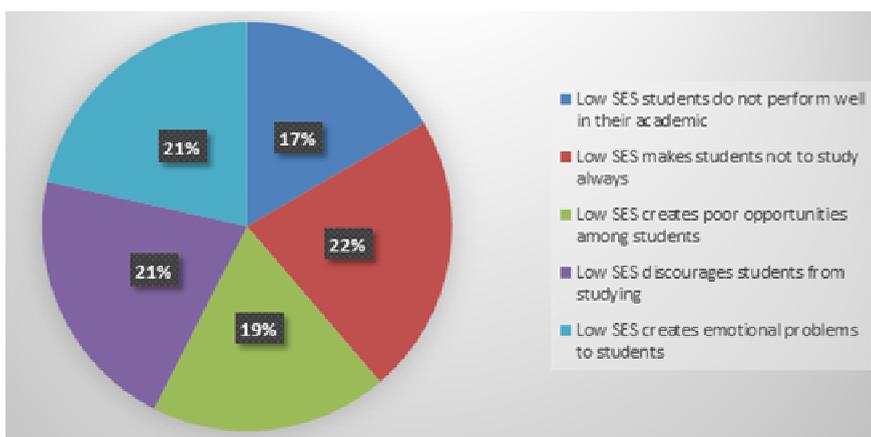

Figure 5   Percentage distribution of the impact of low socio-economic status on student's academic performance (see online version for colours)

Source: Author's computation from the existing data

8   The propensity score matching model

In a bid to examining the impact of low socio-economic status on students' academic performance using tertiary institutions in Enugu State, Nigeria, the study adopted the propensity score matching model. Thus, the results of the model are presented in Table 1.

Table 1   Summary results of the propensity score matching model

n.treat	n.contr	ATT	Std. err	T	P > |z|
256	212	-.6246001	.0344747	-18.1	0.000

The model indicated that the overall significance of F-probability is 0.000. It is shown by the empirical results of the propensity score matching model that being in low socio-economic status decreases the academic performance of students in tertiary institutions in Enugu State, Nigeria. This is because; the average treatment effect (ATT) has a negative sign. The results therefore suggest that a rise in students belonging to the low socio-economic status in Enugu State, students' academic performance would significantly reduce by 62.5%. The negative impact of low socio-economic status is high on the academic performances of these tertiary institution students. The implication here is that majority of students belonging to low socio-economic status who are in tertiary institutions in Enugu State fend for themselves in order to sustain themselves in school, they struggle to get tuition fees and other financial needs by engaging in menial jobs like part-time marketing, receptionists, bar attendants, serving bricklayers, fuel attendants in petrol stations, recharge card sales, hair dressing, barbers, fashioning designing, bags/shoe production and sales, bead makers, masters of ceremony (MCs), event planners, entertainers/comedians, among others.

When students indulge in any of these jobs, they find it difficult to study well as some of them can forfeit their lectures/classes in order to be engage in the job just to make both ends meet. They will either miss tests and/or quizzes, assignments, and interesting lectures/classes that would help them perform better in their academics. If they fail to indulge in this kind of jobs to sustain themselves, they would automatically be out of school (dropout). This is because their parents and/or sponsors may not be able to foot all their bills in school.

In as much as students who belong to low socio-economic status strive harder to perform very well in their academics, they are being distracted by some constraints and/or limitations that mar their efforts to passing their exams very well. These constraints and/or limitation may be attributed to inadequate financial resources to help them pay for tutorials, buy textbooks, purchase data to help them do online research and/or study online, pay tuition fees, pay their accommodation fees, feed appropriately to have good functional brain, among others, as against their counterparts who belong to high socio-economic status.

As a result of these distractions, students in low socio-economic status begin to perform poorly in their academics due to the fact that they do not study always, even when they study, they do it at the wrong time and this will make them not to understand and/or assimilate what they are reading. More so, students in low socio-economic status are more prone to emotional problems which discourages them from studying as and at when do. As a result of this, they become limited to some opportunities which will help them to achieve high in life such as, applying for scholarships. This is because, to qualify to apply for some scholarships, a major requirement is that the student must be outstanding in his/her academic performance (be a first class or second class upper student for universities and/or be a student with distinction for polytechnics/colleges of education) which may be lacking in students with low socio-economic status.

In addition to the above, students in low socio-economic status always see themselves as being inferior to their counterparts in other higher socio-economic strata (middle and high). As a result, they find it difficult to get involved in social gatherings that will help them learn and pay more attention to their academics. They find it difficult to access their counterparts who are brilliant and can teach them after classes and/or tutorials, as these their counterparts may be comparing what they stand to gain from them since they may

not be able to foot their bills let alone paying them for the services rendered. Therefore, the results of the propensity score matching model confirm that low socio-economic status has a negative significant impact on students' academic performance of those in tertiary institutions in Enugu State, Nigeria.

Finally, since the results of the average treatment effect on the treated (ATT) is shown to be –0.6246001, this by implication suggests that with low socio-economic status, academic performance of students in tertiary institutions in Enugu State would decreases by about 62.5% but will rise by about 37.5% if they were to be in the other higher socio-economic strata (middle and high). This is because, poor students constitute about more than 65% (using poverty line as $2 – USD 2) in these tertiary institutions in Enugu State, Nigeria according to the survey data generated for this study.

9   Conclusions and recommendation

Since educational attainment of the citizenry of any country and the quality of the country's education not only determines the developmental strides of the nation but also provide knowledge, skills, and inculcates values, training of instincts and fostering right attitudes/habits to students, this study tried to verify the impact of low socio-economic status on students' academic performance using tertiary institutions in Enugu State, Nigeria as a case study. The study utilised survey data generated from 468 questionnaires distributed among student in 13 higher institutions in Enugu State, Nigeria. The propensity score matching model was adopted for the study and the results indicated that students' academic performances significantly decreases when the student is found to be in low socio-economic status. Moreover, the results of the model confirm that low socio-economic status has negative significant impact on students' academic performance of those in tertiary institutions in Enugu State, Nigeria. In addition to the above, the results also suggested that with low socio-economic status, academic performance of students in tertiary institutions in Enugu state would decrease by about 62.5% but will rise by about 37.5% if the student were to be in the upper echelon of the socio-economic strata (middle and high).

There is need for the government, non-governmental organisations, and other philanthropist to provide education fund concession to students from poor background (low socio-economic status), not to students from the upper socio-economic strata (middle and high) by granting them scholarships, bursary awards, and other special education interventions funds for poor students.

The state and local governments should revitalise the giving of bursary awards to students from the state (especially, the poor ones among them) that are in tertiary institutions, be it private or public. Government and other private tertiary institutions should also reconsider the tuition fees that are payable by the poor. In fact government can make a ceiling on tuition fee of students to reduce the capitalist nature of private institutions. When these are done, it will make higher education affordable by the poor and hence reduce the number of touts on the streets, criminals, armed robbers, drug use, kidnapping, and other social vices thereby, speeding up economic growth and development, not just in Enugu State but, Nigeria as a whole.

Governments and non-governmental organisations, and other private employers in the country should strive more to create jobs especially, for parents and/or sponsors of students from low socio-economic strata of the country who are fit and qualified for

certain good paying jobs but have no opportunity to gain that due to the limitations of the socio-economic strata to which they belong. They can do this by going through the job/employment details of students' parents or sponsors submitted by the students on their admissions.

Governments and non-governmental organisations, and other private employers should design and implement programmes that will make students to have hands-on experience on the job while in school which will make them employable after studies. This employment type can be designed to sooth holiday periods of students in order not to infringe on their academic activities. This will reduce poverty and unemployment rate thereby, lifting people from low socio-economic status to the upper echelon of the socio-economic strata.

References

Abdu-Raheem, B.O. (2015) 'Parents socio-economic status as predictor of secondary school students academic performance in Ekiti State, Nigeria', *Journal of Education and Practice*, Vol. 6, No. 1, pp.123–128, ISSN 2222-1735 (Paper); ISSN 2222-288X (Online).

Ahmar, F. and Anwar, E. (2013) 'Socioeconomic status and its relation to academic achievement of higher secondary school students', *Journal of Humanities and Social Science*, Vol. 13, No. 6, pp.13–20.

Aliyu, G.A. (2016) 'Influence of socio-economic status on academic achievement of senior secondary students in Nassarawa zonal education area of Kano State Nigeria', *Asian Journal of Educational Research*, Vol. 4, No. 4, pp.1–8.

Amadi, E.C. and Segun, I. (2018) 'Influence of family social status on academic performance of senior secondary students on Nsukka Education Zone, Enugu State in Nigeria', *International Journal of Innovative Social Sciences & Humanities Research*, Vol. 6, No. 1, pp.36–41.

Amoo, T.B., Adeyinka, O.P. and Aderibigbe, A.D. (2018) 'Perceived effects of parental socio-economic status on students' academic performance among teachers in Odeda local government, Ogun State, Nigeria', *International Journal of Academic Research in Business and Social Sciences*, Vol. 8, No. 2, pp.262–272.

Anand, P., Mizala, A. and Repetto, A. (2006) *Using School Scholarships to Estimate the Effect of Government Subsidized Private Education on Academic Achievement in Chile*, RePEc, [online] file:///C:/Users/hp/Downloads/anand_mizala_repetto.pdf (accessed 5th December 2018).

Becker, G.S. (1993) *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education*, 3rd ed., University of Chicago Press, Chicago.

Bowles, S. and Gintis, H. (1976) *Schooling in Capitalist America: Education Reform and the Contradictions of Economic Life*, Haymarket Books, Chicago, IL.

Chandra, R. and Azimuddin, S. (2013) 'Influence of socio economic status on academic achievement of secondary school students of Lucknow City', *International Journal of Scientific & Engineering Research*, Vol. 4, No. 12, pp.1952–1960, ISSN 2229-5518.

Collins, R. (1971) 'Functional and conflict theories of educational stratification', *American Sociological Review*, Vol. 36, No. 6, pp.1002–1019.

Doren, C.J. (2013) *Unequal Equality: The Effects of Socioeconomic Status on Academic Achievement in Open and Closed Societies*, pp.1–154, Wesleyan University, The Honors College, Middletown, Connecticut

Eshetu, A.A. (2015) 'Parental socio-economic status as a determinant factor of academic performance of students in regional examination: a case of Dessie Town, Ethiopia', *African Educational Research Journal*, Vol. 3, No. 4, pp.221–229.

Farooq, M.S., Chaudhry, A.H., Shafiq, M. and Berhanu, G. (2011) 'Factors affecting students' quality of academic performance: a case of secondary school level', *Journal of Quality and Technology Management*, Vol. 7, No. 2, pp.1–14.

Ghaemi, F. and Yazdanpanah, M. (2014) 'The relationship between socio-economic status and academic achievement in the EFL classroom among Iranian university students', *European Journal of English Language and Literature Studies*, Vol. 2, No. 1, pp.49–57.

Heckman, J.J., Ichimura, H. and Todd, P.E. (1997) 'Matching as an econometric evaluation estimator: Evidence from evaluating a job training programme', *Review of Economic Studies*, Vol. 64, No. 4, pp.605–654.

Henrietta, M.C. and Odozi, I.C. (2014) 'Influence of parental socio-economic status on academic achievement in selected schools in Nigeria: a case study of Enugu State', *Journal of Education and Practice*, Vol. 5, No. 2, pp.105–122.

Muriungi, P.K. (2017) 'Impact of socioeconomic status on students' performance in the urban slums of Laikipia County Kenya', *International Journal of Information Research and Review*, Vol. 4, No. 2, pp.3778–3781.

National Bureau of Statistics (NBS) (2014) *NBS E-Library, Socio-Economic Statistics*, National Bureau of Statistics Publications [online] https://nigerianstat.gov.ng/elibrary (accessed 3rd December 2018).

National Bureau of Statistics (NBS) (2016) *Social Statistics Report 2016*, National Bureau of Statistics Publications [online] https://nigerianstat.gov.ng/elibrary (accessed 3rd December 2018).

Ogunshola, F. and Adewale, A.M. (2012) 'The effects of parental socioeconomic status on academic performance of students in selected schools in Edu LGA of Kwara State, Nigeria', *International Journal of Academic Research in Business and Social Sciences*, Vol. 2, No. 7, pp.230–239.

Okioga, C.K. (2013) 'The impact of students socio-economic background on academic performance in universities, a case of students in Kisii University College', *American International Journal of Social Science*, Vol. 2, No. 2, pp.38–46.

Omeje, A.N. and Abugu, S.O. (2015) 'The impact of scholarships on students' academic performance: A case of tertiary institutions in Enugu State, Nigeria', *Bulletin of Business and Economics*, Vol. 4, No. 2, pp.93–104.

Ovansa J.U. (2017) 'Effect of socio-economic status on the academic performance of senior secondary school students (A case study of public senior secondary schools in Adavi LGA of Kogi)', *International Journal of Education and Evaluation*, Vol. 3, No. 8.

Ravitch, D. (2010) *The Death and Life of the Great American School System: How Testing and Choice are Undermining Education*, Basic Books, New York, NY.

Rosenbaum, P.R. and Rubin, D.B. (1983) 'The central role of the propensity score in observational studies for causal effects', *Biometrika*, Vol. 70, No. 1, pp.41–55.

Schultz, T. (1963) *Economic Value of Education*, Columbia University Press, New York.

Singh, A. and Vyast, J.P.S. (2014) 'The influence of socio-economic status of parents and home environment on the study habits and academic achievement of students', *Educational Research*, Vol. 5, No. 9, pp.348–352.

Singh, P. and Choudhary, G. (2015) 'Impact of socio-economic status on academic achievement of school students: an investigation', *International Journal of Applied Research*, Vol. 1, No. 4, pp.266–272.

Usman, M.T., Mukhtar, U. and Auwa, S. (2016) 'Parental socioeconomic status and students academic performance in Nigeria Educational system', *International Journal of Education and Information Journal*, Vol. 2, No. 3, pp.14–18.