

## **PARENTAL SOCIO-ECONOMIC STATUS AS A CORRELATE OF SECONDARY SCHOOL STUDENTS' ACADEMIC ACHIEVEMENT IN QUANTITATIVE ECONOMICS IN MINNA METROPOLIS OF NIGER STATE**

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### **Abstract**

This study investigated the parental socio-economic status as a correlate of secondary school students' academic achievement in quantitative Economics in Minna metropolis of Niger State. The study adopted a correlational research design. The target population was 10520 SS II Economics students of public secondary schools within Minna metropolis of Niger State. The sample size consisted of 385 students drawn using simple random and stratified proportionate sampling techniques. The instrument for data collection was quantitative Economics achievement test (QEAT) adopted from Economics WAEC past question paper using SS2 syllabus. The instrument was validated and the reliability of the internal consistency of the instrument (QEAT) was obtained at .808, using Cronbach Alpha. The data collection were analyzed through simple linear regression to answer research questions and Analysis of Variance (ANOVA) were used to test the null hypotheses at 0.05 level of significance. Findings revealed that parents' educational background on students' academic achievement in quantitative Economics is insignificant while parents' occupation, income level on students' academic achievement is significant. The implications of these findings among others highlighted that indirect involvement of high educated parents in their children's education could be corrected by involving teachers and high educated parents in their children's education to improve academic achievement in quantitative Economics. Recommendations made among others were that parents should provide, motivate, support and involve in their children education with necessary materials needed for their studies and government should provide enabling environment for learning.

**Keyword:** parental socio-economic status, academic achievement, quantitative Economics.

### **Introduction**

Understanding the multifaceted determinants of students' academic achievement has long been a focal point in educational research. Among these determinants, parental socio-economic status (SES) stands out as a crucial factor influencing educational outcomes. Parental SES encompasses a spectrum of socio-economic dimensions, including parental education, occupation, and income level, which collectively shape the educational environment and resources available to children (Davis-Kean, 2005; Sirin, 2005). This study delves into the relationship between parental SES and the academic performance of secondary school students, specifically within the domain of quantitative economics education in Minna metropolis, Niger State, Nigeria. Quantitative economics education at the secondary level plays a pivotal role in nurturing students' comprehension of fundamental economic principles, statistical methods, and analytical skills essential for informed decision-making (Machin & Vignoles, 2004). The impact of parental SES on academic achievement in this specific subject area has profound implications for students' academic trajectories and future career opportunities within the dynamic socio-economic landscape of Nigeria. Parental socio-economic status has been

extensively investigated in relation to students' academic performance worldwide. Research consistently demonstrates that higher SES families tend to provide more advantageous learning environments characterized by access to educational resources, cultural capital, and supportive parental involvement (Pong, 1998; Reardon, 2011). These factors collectively contribute to disparities in academic achievement observed across socio-economic strata. The influence of parental SES on academic outcomes is mediated through various mechanisms. For instance, parental education level correlates positively with children's cognitive development and academic motivation, fostering a conducive learning environment (Davis-Kean, 2005). Additionally, economic resources available to families can directly impact students' access to educational materials, private tutoring, and enrichment activities, thereby influencing their academic success (Idika, Obiagu & Ibe, 2023).

### **Literature and theoretical review**

Economics is a field of study in social sciences as well as a subject taught in senior secondary schools in Nigeria. It is a subject that deals with the human behavior in relation to the use of scarce resources in our daily endeavor; it also teaches how these scarce resources could be utilized rationally giving available resources. Robison as cited in Rona (2017:3) defines Economics “as a science that studies human behavior as a relationship between ends and scarce means which has alternative uses”. This definition is widely accepted since it reflects the basic economic problems of scarcity and choice which have alternatives uses, to provide goods and services for present and future consumption better than any other available recognized definition. It studies how society decides what, how and for whom to produce goods and services and also pertinent to highlight the need for the learning of Economics at the various levels of education. In the assertion of Ede, Sylvester and Onuoha (2020:2), “Economics is a science that itself concerned with those institutions which are involved in the use of scarce resources”. That is to say, the analysis of the production and distribution of goods and services to the satisfaction of human wants by the household and the firms. This shows that Economics subject focuses its attention on the analysis of the production, distribution and consumption of goods and services, it also analyzes the choices that individuals, businesses, governments and nations makes in the allocation of resources through the use of knowledge. Economics studies how choices are made by individuals, businesses and government allocating scarce resources in order to satisfy the individual or societal needs Jim (2019).

The significance of economics, as emphasized by the Federal Republic of Nigeria (2014) through the National Educational Research and Development Council (NERDC), extends to various practical applications essential for personal, societal, and national development. Economic education, particularly in the domain of quantitative economics, equips individuals with vital skills and knowledge that go beyond theoretical understanding, enabling them to address contemporary economic challenges effectively.

Quantitative economics is a specialized field within economics that utilizes mathematical and statistical tools to analyze economic phenomena and inform decision-making (Schneider & Tacke, 2016). It plays a pivotal role in cultivating skills highlighted by NERDC, such as time management, problem-solving ability, and the capacity to make informed decisions based on rigorous analysis and empirical evidence (Federal Republic of Nigeria, 2014). Furthermore, quantitative economics enhances individuals' understanding of intricate economic variables, including unemployment dynamics and market behavior (Stock & Watson, 2007). By applying quantitative methods, individuals can optimize their cognitive responses to economic problems, enabling them to forecast economic trends accurately and contribute to evidence-based economic policymaking (Enders, 2015). This field has gained significant importance in recent years due to advancements in computational power and the availability of large datasets

(Breslau, 2013). It involves topics such as basic tools for Economics analysis, simple linear equations, theory of cost, theory of consumer behavior, demand and supply among others (FRN, 2014). It involves the use of quantitative techniques or procedures to verify economic theory from quantitative measurements or to make economic decisions. Quantitative economics prepares students to analyze economic issues, explore theories, and predict future conditions using statistical procedures and mathematical models (Edward, Giraud, & Schinckus, 2018).

Socio-economic status (SES) is the way in which people are divided into groups in a society such that they have certain economic or and social characteristics in common. According to Hittner, Rim & Haase (2019) defined socio-economic status as a representation of an individual's relative position in an economic-social-cultural hierarchy tied to power, prestige, and control over resources. Socioeconomic status is typically broken into three categories namely; High socio-economic status, middle socio-economic status and low socio-economic status, and when placing a family or individual into one of these categories, any or all of the three variables that describe socio-economic i.e. education, occupation and income can be assessed (Agyemang, 2017). Socio-economic status is a composite term composed of social class, financial status, household size, family composition, parents' level of schooling, profession and other variables relevant to family life in the society (Osuafor & Okonkwo, 2013). Many families in Nigeria are poor; they often struggle with providing academic support for their children, this could affect the academic achievement of students from such home (Aliyu, 2016). Likewise, studies have also found that SES does not significantly correlate students' academic achievement (Ogunshola & Adewale, 2012).

Academic achievement refers to the scores obtained by students at the end of an examination, test or assignment. Accordingly, academic achievement as evident in students' grade at the completion of educational benchmarks or in a particular examination remains the most widely used by researchers to evaluate students' achievement. It is a measure of the knowledge and skills acquired by students in a learning institution, which is often determined by test or examination marks allotted by an examiner, the educator (Ganai & Mir, 2013). Adeyemo, (2011) stated that scholastic achievement means achievement a student makes in school namely his marks in the examination, which is the criterion for the achievement of a student. Academic achievement is "measurable in a standardized series of tests" (Idika, Onuoha, Nji & Emmanuel, 2018). In Algarabel & Dasi (2021) academic achievement is a word preferred in the educational or psychometrics field, being sometimes characterized by the degree of inference required on the part of the students to give a response and by the type of reference to cognitive process made explicit in the measurement tool. Furthermore, academic achievement is the outcome of education the extent to which a student, teacher or institution has achieved their education goals.

Parents' educational background is the highest educational qualification obtained by an individual parent. According to Ahmad & Naeema (2013) in their thorough elucidation of parents' educational background, stated that educational level ranges from first school leaving certificate (FSLC) to Doctor of Philosophy (Ph.D.). Singh & Singh, (2014) opined that parents' educational background to academic achievement of students has a great correlate. Students from highly educated parents with higher degree and other qualifications exhibit higher academic attainment in secondary schools. Otengo (2017) posited that educational background of parents which is a needle of socio-economic status has direct relationship on Childs' values and academic achievement in the school. Otengo is of the view that children from illiterate families may learn slight or nothing from home that can help them develop curiosity in academics. Basically, this is in distinction to what is reachable from children of literate families where parents provide manner that is conducive for the formation of good study lifestyle.

Educational levels of parents determine their status and level it correlates in the society. Education provides sundry prospect for individual to function in the society. Students from literate homes likely have an upper academic achievement than folks from illiterate homes (Erick & Nyakundi, 2012).

Parents' occupation is an activity that serves as one's regular source of livelihood. Occupational status reflects the educational attainment required to obtain the job and income levels that vary with different jobs and within ranks of occupations. Furthermore, it shows achievement in skills necessary for the job. Occupational status measures social position by unfolding job characteristics, decision making ability and control, and psychological strain on the job (Erick, & Nyakundi, 2012). Occupations are ranked and some of the mainly high-status occupations are physicians and surgeons, lawyers, chemical and biomedical engineers, and communication analysts. These jobs, careful to be grouped in the high status in classification, because it presents a source of security, providing a measure of a household's ability to meet emergencies, absorb economic shocks, or provide the means to live contentedly. Those jobs with inferior rankings are food preparation workers, counter attendants, bartenders and helpers, dishwashers, maids and housekeepers, vehicle cleaners. These jobs are less respected; less remunerated and is more laborious, very hazardous, and provides less autonomy (Michael 2014).

Parents' income refers to monetary payments received for goods or services or aggregate earning of the parents. Income in term of wages, salaries, profit, rents and any flow of earnings received. Some parents earn high (high socio-economic status), some earn moderate (middle socio-economic status) and some earn low (low socio-economic status) (Agyemang, 2017). According to Trading Economics (2019) groups family monthly income level as (Group 1: <₦18,000- ₦50,000 low-income earners; Group 2: ₦50,000- ₦100,000 middle-income earners and Group3: ₦100,000 above high-income earners). Income can also come in the form of unemployment or workers' compensation, social security, pensions, interests or dividends, royalties, trusts, alimony, or other governmental, public, or family financial assistance (Mashile, 2011). Therefore, Parents income is the total sum of money earns over a period of time.

Theoretically, this study is anchored on three theories namely, Humanistic learning theory by Carl Rogers (1969), Social learning theory by Albert Bandura (1977) and Achievement goal theory by Nicholls (1989). Humanistic learning theory by Rogers (1969) which focused on the idea that children are good at core and that education should focus on rational ways to teach the whole child. It states that the student is the authority on how they learn, and that all of their needs should be met in order for them to learn well. This theory is relevant to this present study since the basic needs of the children are provided by parents and teachers as determinants of academic achievement. The social learning theory by Bandura (1977) revolves around the ideas that human are social creatures by nature, interact with each other, share ideas and observed fellow human beings and motivation. Learning can be in form of observing other people's behavior and imitating the behavior modeled by others and also through motivation. So, this theory is of paramount important to this study as it encourages learners to learn through internalizing the context and reinforcement. The achievement goal theory by Nicholls (1989) focused on the social environmental relationship on the behavior of the learner. By the implication of the theories, children ought to achieve better in school if they are being relate positively with their immediate social environment which includes parents and teachers. The findings of this study added credence to the tenets of these theories.

## Statement of the problem

Despite the wealth of research examining the influence of parental socio-economic status (SES) on academic achievement, there exists a notable research gap concerning its specific impact within the context of quantitative economics education in Minna metropolis, Niger State. While studies have explored the broader relationship between SES and academic performance across various subjects and regions, there is limited empirical evidence focusing specifically on how parental SES influences students' achievement in quantitative economics within this specific geographic and educational setting.

Understanding this relationship is imperative for several reasons. First, quantitative economics education plays a critical role in equipping students with essential analytical and decision-making skills necessary for navigating economic challenges in today's globalized world. However, the extent to which parental SES affects students' performance and engagement in this subject area remains unclear. Second, Minna metropolis, like many regions in Nigeria, exhibits socio-economic diversity that may impact educational opportunities and outcomes. Investigating the influence of parental SES on students' academic achievement in quantitative economics can shed light on the underlying socio-economic disparities that may exist within the education system of this region.

Furthermore, addressing this research gap is crucial for the development of targeted interventions aimed at mitigating educational disparities and enhancing academic outcomes. By uncovering how specific socio-economic factors within families influence students' success in quantitative economics, policymakers and educators can implement evidence-based strategies to support students from diverse backgrounds and promote educational equity. Therefore, bridging this research gap will not only contribute to the theoretical understanding of the relationship between parental SES and academic achievement but also have practical implications for educational policy and practice in Minna metropolis, ultimately leading to more effective interventions aimed at improving educational outcomes and fostering inclusive education.

### **Research Question**

The study intends to provide answer to the questions below:

1. What is the relationship between parents' educational background and students' academic achievement in quantitative Economics?
2. What is the relationship between parents' occupation and students' academic achievement in quantitative Economics?
3. What is the relationship between parents' income and students' academic achievement in quantitative Economics?

### **Hypotheses**

1. There is no significant relationship between parents' educational background and students' academic achievement in quantitative Economics.
2. There is no significant relationship between parents' occupation and students' academic achievement in quantitative Economics.
3. There is no significant relationship between parents' income level and students' academic achievement in quantitative Economics.

### **Methods**

The study adopted a correlational research design. According to Nworgu (2018), correlational design is the type of study that seeks to establish what relationship exists between two or more variables. Correlational design is appropriate in this study because it establishes the relationship between parents' socio-economic status on secondary school students' and

academic achievement in quantitative Economics The research was carried out in Minna metropolis of Niger State. The population of the study was 10,520 SSII Economics Students and the sample size of the study is 385 students of Economics were obtained through a simple random sampling technique. With a total of 31 public senior secondary schools located within the two Local Government Areas, comprised of Bosso and Chanchaga, for 2022/2023 academic session. The instrument used for the study is Quantitative Economics Achievement Test (QEAT) of 25 items. Three experts in the Faculty of Education, Department of Social Science Education and measurement and evaluation in University of Nigeria, Nsukka validated the instrument. The instruments were trial tested on 30 students in Abubakar Dada Secondary School Paiko in Niger State outside the study area but have similar features with the Area of the study. The reliability of the instrument using Cronbach Alpha was .81. The questionnaires were administered to the respondents by the researcher with the help of research assistants. The research questions were answered using linear regression and the hypotheses were analyzed by using regression ANOVA.

## Results

**Research Question 1:** what is the relationship between parents' educational background and students' academic achievement in quantitative Economics?

**Table 1**

*Relationship between Parents' Educational Background and Students' Academic Achievement in Quantitative Economics*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.021	.000	-.002	11.37353

a. Predictors: (Constant), parents' educational background

Tables 1 show the relationship between parents' educational background and students' academic achievement in quantitative Economics. From the result displayed, the correlation of parents' educational background is 0.021 with the coefficient of determination as 0.000. This implies that parents' educational background and students' academic achievement in quantitative Economics have a very low correlation.

**Hypothesis 1:** There is no significant relationship between parents' educational background and students' academic achievement in quantitative Economics.

**Table 2**

*Analysis of Variance on the Relationship between Parents' Educational Background and Students' Academic Achievement in Quantitative Economics*

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	22.307	1	22.307	.172	.678
	Residual	49543.833	383	129.357		
	Total	49566.140	384			

a. Dependent Variable: Academic achievement

b. Predictors: (Constant), parents' educational background

The result on Table 2 was used to test hypothesis 4 from the result, the probability associated with the calculated F-ratio of 0.172 with an associated exact probability value of 0.678 was obtained. This exact probability value of 0.678 is greater than 0.05 level of significance set as a benchmark for testing the hypothesis. Therefore, the result was found to be an insignificant relationship. The null hypothesis was therefore not rejected and the inference was drawn that, there is an insignificant relationship between parents' educational background and students' academic achievement in quantitative Economics.

**Research Question 2:** what is the relationship between parents' occupation and students' academic achievement in quantitative Economics?

**Table 3**

***Relationship between Parents' Occupation and Students' Academic Achievement in Quantitative Economics***

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.112	.013	.010	11.30393

a. Predictors: (Constant), parents' occupation

Tables 3 show the relationship between parents' occupation and students' academic achievement in quantitative Economics. From the result displayed, the correlation of parents' occupation is 0.112 with the coefficient of determination as 0.013. This implies that parents' occupation and students' academic achievement in quantitative Economics have low correlation.

**Hypothesis 2:** There is no significant relationship between parents' occupation and student's academic achievement in quantitative Economics.

**Table 4**

***Analysis of Variance on the Relationship between Parents' Occupation and Students' Academic Achievement in Quantitative Economics***

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	626.866	1	626.866	4.906	.027
	Residual	48939.274	383	127.779		
	Total	49566.140	384			

a. Dependent Variable: Academic achievement

b. Predictors: (Constant), parents' occupation

The result on Table 4 was used to test hypothesis 5 from the result, the probability associated with the calculated F-ratio of 4.906 with associated exact probability value of 0.027 was obtained. This exact probability value of 0.027 is less than 0.05 level of significant set as a benchmark for testing the hypothesis. Therefore, the result was found to be significant. The null hypothesis was therefore rejected, and inference was drawn that, there is significant relationship between parents' occupation and students' academic achievement in quantitative Economics.

**Research Questions 3:** what is the relationship between parents' income level and students' academic achievement in quantitative Economics?

**Table 5*****Relationship between Parents' Income Level and Students' Academic Achievement in Quantitative Economics***

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.106	.011	.009	11.31179

a. Predictors: (Constant), parents' income level

Tables 5 show the relationship of parents' income level and students' academic achievement in quantitative Economics. From the result displayed, the correlation of parents' income level is 0.106 with the coefficient of determination as 0.011. This implies that parents' income level and students' academic achievement in quantitative Economics have a very low correlation.

**Hypothesis 3:** There is no significant relationship between parents' income level and student's academic achievement in quantitative Economics.

**Table 6*****Analysis of Variance on the Relationship between Parents' Income Level and Students' Academic Achievement in Quantitative Economics***

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	558.788	1	558.788	4.367	.037
	Residual	49007.352	383	127.957		
	Total	49566.140	384			

a. Dependent Variable: Academic achievement

b. Predictors: (Constant), parents' income

The result on Table 5 was used to test hypothesis 3 from the result, the probability associated with the calculated F-ratio of 4.367 with associated exact probability value of 0.037 was obtained. This exact probability value of 0.037 is less than 0.05 level of significant set as a benchmark for testing the hypothesis. Therefore, the result was found to be significant. The null hypothesis was therefore rejected, and inference was drawn that, there is significant relationship between parents' income level and students' academic achievement in quantitative Economics.

**Discussion**

The study investigated the relationship between parental socio-economic status as a correlate of students' academic achievement in quantitative Economics. A simple linear regression analysis was conducted on the data. The result of the hypothesis showed that there was no significant relationship between parents' educational background and students' academic achievement in quantitative Economics because the exact probability value of 0.678 is greater than 0.05 level of significant set as a benchmark for testing the hypothesis. This means that some educated parents do not have enough time for their children education due to their busy schedules. Thus, the finding of the study is contrary to the previous studies of Chinonyelum, Mercy and Emmanuella (2020) that parents' educational qualification influences the academic achievement of secondary school students.



The summary of Table 2 showed the relationship between parents' occupation on students' academic achievement in quantitative Economics which is research questions five. From the result displayed, the correlation of parents' occupation is 0.112 with the coefficient of determination as 0.013. This implies that students' academic achievement in quantitative Economics has a very low correlation to parents' occupation. These indicate that some parents may be busy due to their schedule because of their esteem occupation, the more parents involve in their children's education the better the improvement on their academic achievement. The hypothesis revealed that there is a significant relationship between parents' occupation and students' academic achievement in quantitative Economics. This concurred with the view of Odikpo and Ejide (2021) that parental occupation has a significant influence on students' academic achievement. Idris and Rufus (2021) carried out a study on parents' occupation on academic achievement of their children indicating that parents' occupation correlates with the academic achievement of their children in senior secondary schools. Accordingly, the findings of this study lays credence to the findings of Amadi (2020) that parents' occupation determines the type of school children attend; higher parental occupational status predicts higher academic achievement for children in schools and none of the reviewed studies against the findings of the current study.

The finding in Table 3 indicates the relationship between parents' income level on students' academic achievement in quantitative Economics from the result displayed, the correlation of parents' income level is 0.106 with the coefficient of determination as 0.011. This implies that students' academic achievement in quantitative Economics has a very low correlation to parents' income level. The hypothesis supported that there is a significant relationship between parents' income level on students' academic achievement in quantitative Economics. This is in conformity with Angelina, Jonathan and Selpher (2022) establish a moderate positive correlation between parents' level of income and students' academic achievement the difference in correlation might be in the population or design of the current study. Anetor (2021) and Monday (2020) are of the view that parents' income level correlates students' academic achievement. In contrary the study did not disagree with any of the reviewed studies.

## Conclusion

The findings of the study revealed that there was no significant relationship between parents' educational background on students' academic achievement in quantitative Economics. Parents with higher qualifications should devote time for their children's education, knowing the importance of being educated, stand a better chance to support their children for better academic achievement. Parents' occupation has a significant relationship with students' academic achievement in quantitative Economics, since some high prestigious occupational parents support and motivate their children for a better occupation in order to strive and sustain their lives. Parents with high incomes should do more by funding their children's education and providing them with the necessary reading materials, favorable learning environment and equipment to enhance their academic pursuits while does with lower incomes should strive to help their children's education to compete with their counterparts from higher-income parents.

## Recommendations

The following recommendations are made according to the findings of the study.

1. There is a need to develop and implement targeted support programs which could include additional tutoring, specialized coursework, or enrichment activities focused on strengthening students' academic achievement in quantitative Economics, especially for those from diverse socio-economic backgrounds. By providing tailored support,

- educational institutions can help bridge potential gaps and promote greater academic achievement and engagement in quantitative Economics among students.
2. Parents should encourage their children to strive hard while in school and provides the necessary learning materials that could enhance students' academic achievement in quantitative Economics.
  3. Government should therefore provide adequate reading materials and a conducive learning environment for the less privileged so they can also compete favorably with their counterparts from high occupations.
  4. Parents with low-income level should diversify their sources of income to enable them cater for their children school so that it would improve their academic achievement in quantitative Economics.

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