

## Impact of Subsidy Removal on Mathematics Education in Nigerian Schools

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### Abstract

This paper assessed the impact of subsidy removal on mathematics education in Taraba state. Secondary data were used in the paper. The data were collected from print and online publications. The paper concluded that subsidy removal in Nigeria has affected implementation of mathematics education in Taraba state and affected supervision of mathematics education. It has also led to increment in the prices of instructional materials of mathematics. Based on this, the paper recommended that government should increase the funding of education and increase salaries and allowances of mathematics teachers. Government should increase budgetary allocation for the supervision of mathematics programme and subsidize the prices of mathematics instructional materials.

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**Keywords: Impact, Mathematics Education, Subsidy Removal.**

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### 1.0 Introduction

In his inaugural address, President Tinubu declared that there would no longer be a petroleum subsidies regime as it was not sustainable. “We commend the decision of the outgoing administration in phasing out the petrol subsidy regime which has increasingly favoured the rich more than the poor. Subsidy can no longer justify its ever-increasing costs in the wake of drying resources. We shall, instead, re-channel the funds into better investment in public infrastructure, education, health care and jobs that will materially improve the lives of millions,” as reported by (Majeed 2023; Ogunode & Ojochenemi, 2023).

Nigeria has spent trillions of naira on petrol subsidies in recent years, more than it spent on healthcare, education and key areas of human capital development. Experts and global development organisations have warned against the policy and its effect on Nigeria’s fiscal sustainability. This year, the immediate past government only provided budgetary allocation for petrol subsidy until 30 June, after saying it would leave the incoming administration to make a final decision on the matter (Ogunode & Ojochenemi, 2023).

The removal of subsidies on fuel in Nigeria has led to an increment in prices of goods and services which had impacted negatively on every institution in the country. The abrupt increase in fuel prices resulting from the subsidy removal has affected all educational institutions and their respective programmes. Nigerian educational institutions are offering many educational programme from the basic education to the tertiary education level. Mathematics programme is one of the major programmes in Nigerian educational institutions.

Mathematics is a science programme. Mathematics programme cover a lots of programmes.

Mathematics can be defined as a group of related sciences, including geometry, calculus and algebra, which is focused on the study of number, space, shape, and quantity, and how they interrelate using a specialized notation. Mathematic is involved in the solution of a problem or study of some scientific field (Info-guide Nigeria, 2018). Mathematics uses numbers and symbols in the study of measurement, relationships, and properties of quantities and sets. The branches of mathematics include Arithmetic, algebra, geometry, and calculus. Mathematics entails the study of equations, functions, geometric shapes, numbers, equations, and their relationships (Info-guide Nigeria, 2018). It is imperative to examine the impact of subsidy removal on implementation of mathematics education in Taraba state, Nigeria.

### **Purpose of the Study**

The purpose of this paper was to examine the impact of subsidy removal on the implementation of mathematics education in Taraba state, Nigeria. Specifically;

1. To find out the impact of subsidy removal on teaching and learning of mathematics education in Taraba state.
2. To assess the impact of subsidy removal on instructional materials of mathematics programme in Taraba state.
3. To identify the impact of subsidy removal on supervision of mathematics programme in Taraba state.

### **Research Questions**

The following questions were formulated to guide the paper;

1. What is the impact of subsidy removal on teaching and learning of mathematics programme in Taraba state?
2. What is the impact of subsidy removal on instructional materials of mathematics programme in Taraba state?
3. What is the impact of subsidy removal on supervision of mathematics programme in Taraba state?

## **2.0 Review of Related Literatures**

### **Concept of Subsidy**

Subsidy is a deliberate attempt by the government to support a chosen economic agent – a consumer and a producer and it can be applied in any market that involves the buying and selling of products and or services (CPA, 2012). Haley and Haley (2013) pointed out that subsidies are provided in diverse formats, encompassing direct assistance such as cash grants and interest-free loans, as well as indirect support such as tax exemptions, insurance coverage, low-interest loans, accelerated depreciation, and rent rebates. It is any measure that keeps the prices consumers pay for a good or product below market levels for consumers or for producers. According to IMF et al. (2022), subsidies can take various forms, including direct government expenditures, equity infusions, tax incentives, soft loans, government provision of goods and services and procurement on favourable terms, and price supports such as price reduction. Subsidies are financial or non-financial incentives provided by the government or other organizations to support specific industries, sectors, or individuals (Scott & Kvilhaug, 2022).

### **Concept of Subsidy Removal**

Subsidy removal is the official termination of subsidies on goods and services that are enjoying subsidies before. Subsidy removal is a policy to end subsidy payment on goods and services within a country (Ogunode, 2023). Subsidy removal is an official elimination of subsidy on products formerly subsidized. Subsidy removal is the decision of government or institutions to stop payment of subsidy on products or services previously subsidized. Subsidy removal is the stoppage of subsidy regime in an institutions or country. Subsidy removal is the policy of liberating the prices of goods and service to be regulated by forces of demand and supply (Ogunode & Aregbesola, 2023).

### Concept of Mathematic Programme

Mathematics is the science of measurement, quantity and magnitude. It is also refers to as the abstract science which investigates deductively the conclusions implicit in the elementary conceptions of spatial and numerical relations. It is also defined as the science of number and space. Mathematics is also called science of logical reasoning. Locke had said “mathematics is a way to settle in the mind a habit of reasoning”. Here the results are developed through a process of reasoning. The reasoning in mathematics is of peculiar kind and possesses a number of characteristics such as simplify, accuracy, certainty of result, originality and verification (Kyari, Obed & Yalwa, 2018).

Mathematics programme is a special programme. Mathematics programme is a programme that involved calculation. Mathematics is a programme that deal with humanity. Kyari, Obed and Yalwa (2018), agrees that Mathematics holds the mirror up to civilization. It is no exaggeration to say that the history of mathematics is the history of civilization. Mathematicians can take pride in the fact that their science, more than any other’s is an exact science, and that hardly anything ever done in mathematics has proved to be useless.

Emmanuel and Daniel (2017), Ogunode and Emmanuel (2021), submitted that there is no doubt that mathematics has extensive application in life and related fields. According to observation “mathematics is a gate-way to science”. Mathematics is a language. It is the language without which science, commerce, industry the internet and the entire global economic infrastructure is struck dump. It is the only “truly” universal language, and it is an essential part of our personal and working life. Mathematics is not only a language and a subject, it is also critical in fostering logical, rigorous thinking, as such, its influence is immense. Everyone recognizes that it is vital to be able to read and write basic language (English). In mathematics, the equivalence of basic reading and writing is numeracy; numbers are the sound, syllables and word of the language of mathematics. Ogunode & Olaoye (2021) agrees that the place of Mathematics goes beyond the science of numbers which is taught by teachers in institutions which appeals to or feared by many students. It is vital and contributes significantly to the live of individuals, the world and society as a whole. Mathematics is an important discipline acknowledged universally and needs to be significantly spread in education to provide student the skills required for achieving higher education, career and for the achievement of personal fulfillment. Mathematics affects all aspects of human life it is essential in education to assist students and all categories of people in all occupations to execute their daily tasks efficiently and productively so as to be functional, independent individuals , well informed, and members of a society, where Mathematics is fundamental (Info-guide Nigeria, 2018).

Ogunode and Olaoye (2021) opined that Mathematics programme is part of human being thought. It helps to understand the world and the human logic. Mental discipline and logical conclusion are built through mathematics programme. Mathematics programme helps the students to understand other mathematical related field. Mathematics programme has provided the mental discipline required for understanding other disciplines. Mathematic knowledge is an important attribute of individuals living more effective lives as constructive,

concerned and reflective citizens. Mathematical literacy is taken to include basic computational skills, quantitative reasoning spatial ability.

### 3.0 Discussion

#### Impact of Subsidy Removal on Mathematics Education

##### What is the Impact of Subsidy Removal on Teaching and Learning of Mathematics Education in Taraba state?

Subsidy removal on fuel in Nigeria has affected implementation of mathematics education in Taraba state. This submission is attested to by Ogunode & Aregbesola (2023) stated that teaching programme implementation in Nigerian educational institutions has been affected by the subsidy removal. The increment in fuel price has led to an increment in transportation fares which directly and indirectly affected the teachers' movement to schools. Many teachers are now missing classes due to their inability to come to school while in tertiary institutions many lecturers have decided to compress their lectures to once or twice a week. And other lecturers have changed to a virtual model of teaching. Ogunode, Somadina and Johnson (2023), Ogunode and Chukwuemeka (2023), asserted that removal of subsidy on petroleum product affected implementation of school curriculum by reducing teaching and learning period in some school across the country.

##### What is the Impact of Subsidy Removal on Instructional Materials of Mathematics in Taraba state?

Removal of subsidy on petroleum product in Nigeria has led to increment in the prices of mathematics instructional materials. Ogunode and Ojochenemi (2023), maintained that subsidy removal of fuel products in Nigeria has led to an increment in the price of instructional materials resources. Also, Okonkwo (2023), Omoniyi (2023), Ogunode and Ukozor (2023), asserted that the prices of various instrument materials have gone up due to the removal of subsidies in Nigeria. Subsidy removal affected by the petrol price hike is the prices of commodities in the market moving up high. The cost of instructional materials is very high because of the cost of transporting these resources from the cities (Darlington & Monday, 2023; Ejiogu et al., 2023). Ogunode and Ukozor (2023), submitted that the increase in the price of fuel has worsened the state of teachers and students who have to depend daily on transportation to school. It makes life more difficult as most of them depend on petrol price to effectively carry out their educational programme. Increment in price of fuel have affected most academic staff (Mathematics teachers).

##### What is the Impact of Subsidy Removal on Supervision of Mathematics Education in Taraba state?

Mathematics education supervision has been affected by fuel subsidy removal. Due to increase in the fuel prices supervision activities have been reduced generally for all educational programme because supervision involve movement that is mostly done by fuel. Subsidy removal in Nigeria have led to reduction in the supervision activities in educational institutions across the country. Ogunode and Ibrahim (2023), Onele and Aja (2016), defined instructional supervision as a programme of instruction designed to improve teachers' job performance and students' academic performance in schools. Instructional supervision is a combination of activities meant to advance the work effectiveness of teachers and other personnel in the school business (Ogunode & Richard, 2021; Ekundayo, Oyerinde & Kolawole 2013). Instructional supervision is the process of improving teaching and learning in educational institutions because of realizing the goals of education. Instructional supervision is critical to the development of education. Ogunode et al (2023a) concluded that the removal of subsidy on fuel in Nigeria have trigger the prices of fuel making its difficult for supervisors to move from school to school for supervision.

Musa (2023) quoted a school Supervisor who lamented the cost involve in carrying out school supervision which is very high and supervision budget have not been increased. Supervision of educational institutions have been affected due to the increment in the price of fuel because of subsidy removal.

#### 4.0 Conclusion and Recommendations

**This paper** assessed the impact of subsidy removal on mathematics education in Taraba state with specific references to impact of subsidy removal on teaching and learning of mathematics education; impact of subsidy removal on instructional materials of mathematics and impact of subsidy removal on supervision of mathematics education in Taraba state, Nigeria.

Data analyzed from secondary data led to conclusion that subsidy removal in Nigeria with reference to Taraba state has affected implementation of mathematics education in Taraba state and affected supervision of mathematics education. It has also led to increment in the prices of instructional materials of mathematics.

Based on this, the paper recommended the following:

1. Government should increase the funding of education and increase salaries and allowances of mathematics teachers.
2. Government should increase budgetary allocation for the supervision of mathematics programme
3. Government should subsidize the prices of mathematics instructional materials.

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