International Journal of Spectrum Research in Education & Humanities (IJSREH)
1(3), July-September, 2025, Pages 33-44

ISSN: 3092-9539

https://doi.org/10.5281/zenodo.16397123

Analyzing the Effects of the 2023 Fuel Subsidy Removal Policy on Tertiary Institution Budgets and Academic Programmes in Nigeria

Obinna Arize Ufoaro

Economics Department, Nwafor Orizu College of Education, Nsugbe
obinnaufoaro@gmail.com

ABSTRACT

This study examines the effects of the 2023 fuel subsidy removal policy on tertiary institution budgets and academic programmes in Nigeria. The removal of fuel subsidies can have profound implications for universities, impacting their financial resources and operational costs. Through a comprehensive analysis, this research investigates the challenges faced by tertiary institutions following the elimination of fuel subsidies, focusing on budgetary constraints, resource allocation, and the sustainability of academic programs. The study explores strategies employed by universities to mitigate these effects, including alternative funding sources, energy efficiency measures, collaborative research projects, curriculum review, diversification of income streams, capacity building, and policy engagement. Drawing on a combination of qualitative data, and interviews with tertiary institution administrators, financial reports, and policy documents, this study provides understanding into the multifaceted impacts of fuel subsidy removal on tertiary institutions. The findings contribute to the understanding of the resilience and adaptability of universities in the face of economic challenges, offering practical recommendations for policy-makers, university administrators, and stakeholders to support the sustainability of academic programs in a post-subsidy environment.

Keywords: fuel subsidy, economic policy, tertiary institution, budgets, academic programs

INTRODUCTION

A subsidy is a financial assistance or support provided by the government or a public entity to certain industries, businesses, or individuals. It is designed to encourage specific activities, promote economic growth, or address market failures. Subsidies can take various forms, such as direct cash payments, tax breaks, reduced interest rates on loans, or price supports. In the context of fuel subsidies, governments often subsidize the cost of fuel to keep prices artificially low for consumers (Shittu et al, 2024). While subsidies can have positive effects like promoting access to essential goods, they can also lead to economic distortions, inefficiencies, and budgetary strains when mismanaged.

Fuel subsidy removal is a significant policy change that can have profound effects on various sectors of an economy, including the education sector. In Nigeria, where fuel subsidies have been a long-standing policy, the removal of these subsidies can impact tertiary institutions' budgets and academic programs in significant ways (Soile & Mu, 2015). Fuel subsidies have been a contentious issue in Nigeria, with arguments both for and against their removal. However, in recent years, the government decided to remove fuel subsidies in an attempt to redirect funds to other sectors and reduce fiscal deficits (Okorie & Wesseh 2024). This policy shift has had a ripple effect on tertiary institutions, particularly in terms of their budgets and academic programs in tertiary institutions.

Tertiary institutions, also known as universities or colleges, are higher education establishments providing post-secondary education beyond the secondary school level. These institutions offer a wide range of academic programs, including undergraduate and graduate degrees, vocational training, and research opportunities (Ogunode et al, 2023). Tertiary institutions play a crucial role in society by preparing students for specialized careers, fostering critical thinking and

research skills, and contributing to knowledge creation through research. They are key components of a country's education system, shaping the workforce and driving innovation and intellectual advancement. Tertiary institutions often receive funding from governments, tuition fees, and research grants to support their operations and academic programs (Ogunode & Ayeni, 2024).

Tertiary institutions in Nigeria heavily rely on fuel for various activities, such as powering generators for electricity due to unreliable public power supply. The removal of fuel subsidies directly impacts the cost of fuel, leading to increased operational costs for universities (Ogunode & Ukozor, 2024). For example, the University of Lagos, one of Nigeria's largest universities, reported a significant rise in its fuel expenses following subsidy removal. This increase in operational costs has strained university budgets, forcing them to reallocate funds from other areas such as academic programs, research, and infrastructure maintenance. Budgets are fundamental financial plans that outline an organization's anticipated income and expenses over a specific period (Jaja et al, 2023). They serve as crucial tools for decision-making, resource allocation, and performance evaluation.

A well-crafted budget aligns financial resources with strategic goals, ensuring efficient use of funds and accountability. It provides a roadmap for managing costs, investing in priorities, and identifying potential areas for improvement. Budgets are dynamic documents, requiring regular monitoring and adjustments to adapt to changing circumstances (Isaac, 2014). Whether in businesses, governments, or institutions, budgets play a vital role in guiding financial stewardship and organizational success. With the sudden rise in fuel expenses, universities are faced with the challenge of reallocating their budgets to accommodate these increased costs. For instance, funds initially allocated for academic programs and faculty development may need to be diverted to cover fuel expenses (Olaniyan & Efuntade, 2020). This reallocation can have a detrimental effect on the quality of education and research output. Universities are forced to make tough decisions regarding their priorities, often leading to reduced funding for critical areas such as laboratory equipment, library resources, and student scholarships.

Fuel subsidy removal also affects the daily operations of academic programs within universities. Many institutions have had to implement measures to mitigate the impact of increased fuel costs on academic activities (Haley & Haley, 2013). For example, some universities have resorted to reducing the number of lectures or classes held per week to conserve fuel used for generators. This reduction in teaching hours can hinder students' learning experiences and prolong the time required to complete academic programs. In response to these challenges, universities have devised strategies to cope with the effects of fuel subsidy removal (Kasimu & Ogunode, 2023). One common strategy is the adoption of alternative energy sources, such as solar power, to reduce reliance on fuel-powered generators.

The motivation for studying the effects of fuel subsidy removal on tertiary institution budgets and academic programs stems from the significant impact such policy changes can have on higher education. Fuel subsidies are often crucial for universities and colleges to manage their operational costs, including transportation for students, faculty, and staff, as well as powering generators for uninterrupted electricity supply (Wilson, 2022). When these subsidies are removed or reduced, tertiary institutions face financial challenges that can affect their budgets and academic programs. For instance, a study by Ogunode and Omolewa, 2023) found that fuel subsidy removal in Nigeria led to increased operational costs for universities due to higher fuel prices, impacting their ability to provide essential services and maintain academic quality. This study highlights the need to understand how fuel subsidy removal affects tertiary institution budgets, which can subsequently influence academic programs.

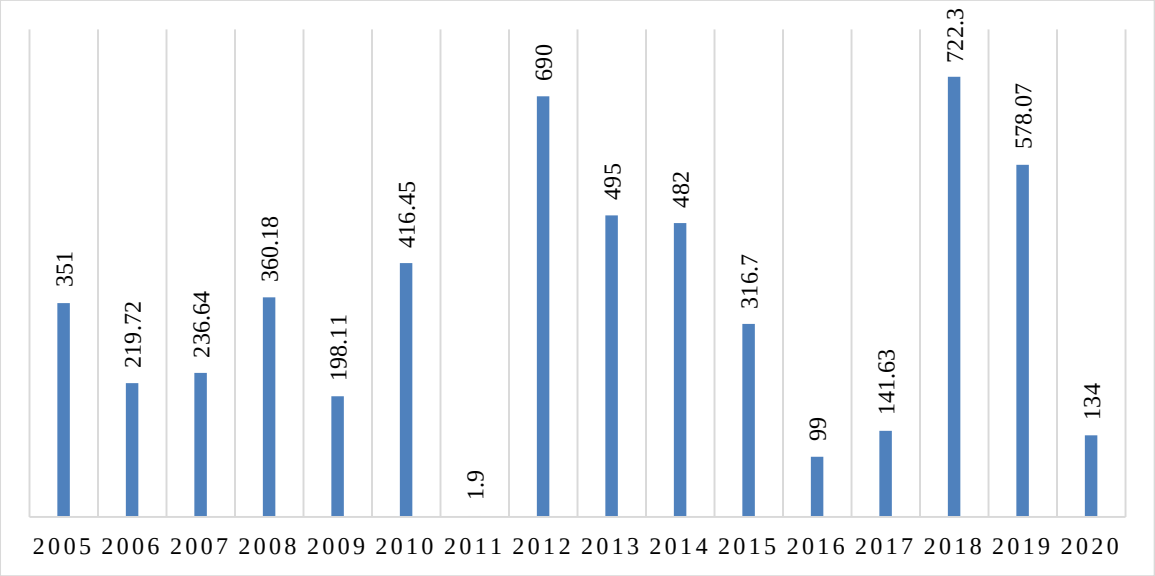
Moreover, the study by Harun et al, (2018) noted that fuel subsidy removal can lead to inflation and higher transportation costs, which directly impact students' ability to afford education. This underscores the importance of investigating how such policy changes affect student enrollment, retention, and the overall quality of education provided by tertiary institutions. By analyzing these effects, policymakers, university administrators, and stakeholders can better anticipate challenges,

develop mitigation strategies, and ensure the continued effectiveness and sustainability of higher education in the context of fuel subsidy reforms.

Overview of Fuel Subsidy Removal

Fuel subsidies involve the government providing financial assistance to reduce the cost of fuel for consumers. This is typically done by selling fuel at a price lower than the market price or compensating producers for selling fuel at a lower price (Clements et al, 2014). The intention behind fuel subsidies is to make energy more affordable for citizens, especially those with lower incomes, and to support economic activities that rely on energy, such as transportation and manufacturing.

Figure 1 illustrates Nigeria's fuel subsidy payments from 2005 to 2020, showing substantial fluctuations over the years. The data reveals a significant increase from ₦351 billion in 2005 to ₦1.9 trillion in 2011, representing a sharp rise in subsidy expenditure. This peak is followed by fluctuations, with notable decreases in 2016 and 2020 (Akoje, 2022). These figures reflect the economic impact of fuel subsidies, with higher payments indicating increased government spending. The table also highlights the substantial amounts in United States Dollars, emphasizing the magnitude of Nigeria's fuel subsidy burden on its budget and the broader economy over this 16-year period.



Source: Akoje (2022)

Figure 1: Nigeria's fuel subsidy payments in billion Naira from 2005 to 2020

Fuel subsidy removal is often driven by economic, fiscal, and environmental considerations. Governments may decide to remove fuel subsidies to reduce budget deficits, reallocate resources to other sectors, improve fiscal sustainability, and enhance market efficiency (McCulloch, 2023). Additionally, the environmental impact of fuel subsidies, including increased greenhouse gas emissions, can be a factor in their removal as countries aim to transition to cleaner energy sources.

The removal of fuel subsidies can have wide-ranging effects across various sectors of the economy. For instance, it can lead to an increase in fuel prices, which affects transportation costs and the prices of goods and services. This can contribute to inflation and impact the purchasing power of consumers, particularly those with lower incomes (Okorie & Wesseh, 2024). Industries that rely heavily on fuel, such as transportation and agriculture, may also face increased production costs, affecting their competitiveness and profitability.

The impact of fuel subsidy removal on the education sector is multifaceted. Tertiary institutions rely on fuel for transportation, electricity generation, and other operational needs. When fuel prices rise due to subsidy removal, universities and colleges face higher operational costs, which can strain their budgets (Tewe et al, 2024). This, in turn, may affect the availability of resources for

academic programs, research, and student services. Moreover, the increased transportation costs resulting from fuel subsidy removal can directly affect students. Many students commute to universities and colleges, and higher transportation costs may pose a financial burden, leading to decreased enrollment or increased dropout rates (Whalen et al, 2013). Additionally, higher fuel prices can impact the cost of living for students, affecting their overall affordability of education.

Fuel Subsidy Removal and Tertiary institution Budgets

Tertiary institution budgets encompass various components, including personnel costs, infrastructure maintenance, academic programs, research activities, and operational expenses. These budgets are crucial for ensuring the smooth functioning of universities and colleges, providing quality education, and supporting research initiatives (Barr & McClellan, 2018). However, the allocation of funds within these budgets can vary based on the institution's priorities and needs. For example, some institutions may prioritize research funding, while others may focus more on enhancing infrastructure or student support services. Regardless of the specific allocation, fuel expenses often represent a significant portion of tertiary institution budgets due to their essential role in powering campus operations.

Fuel subsidy plays a crucial role in the operations of tertiary institutions, as it directly impacts transportation, electricity generation, and other essential services. Universities rely on fuel for running generators during power outages, operating campus shuttles for students and staff, and fueling research activities that require travel (Wong et al, 2022). Subsidized fuel prices allow universities to manage their operational costs more efficiently, ensuring the continuity of academic programs and services. Without fuel subsidies, tertiary institutions may face budgetary constraints that hinder their ability to maintain essential services and support academic activities effectively.

In many cases, tertiary institutions allocate a significant portion of their budgets to fuel expenses. This allocation covers the purchase of fuel for electricity generation, transportation services, and other fuel-dependent activities on campus (Naderipour et al, 2021). Universities often have to balance their budgets carefully to ensure that they can meet these fuel expenses while also allocating funds for academic programs, research, and student services. However, the removal of fuel subsidies can disrupt this balance by increasing fuel costs, leading to budgetary challenges for universities.

Projected Changes in Tertiary Institution Budgets after Subsidy Removal

The removal of fuel subsidies has significant implications for tertiary institution budgets, particularly in terms of operational costs, budget reallocation, impact on research, student accessibility, and the quality of education as captured in Figure 2. These projected changes paint a complex picture of how subsidy removal can affect universities and colleges. One of the immediate effects of fuel subsidy removal is the rise in operational costs for tertiary institutions. With higher fuel prices, universities will face increased expenses for electricity generation, transportation services, and fuel-dependent activities. For instance, running generators during power outages becomes more costly, impacting the institution's ability to maintain essential services (Islam et al, 2023). Additionally, transportation services for students and staff, such as campus shuttles, will require more funds, contributing to the overall rise in operational costs.

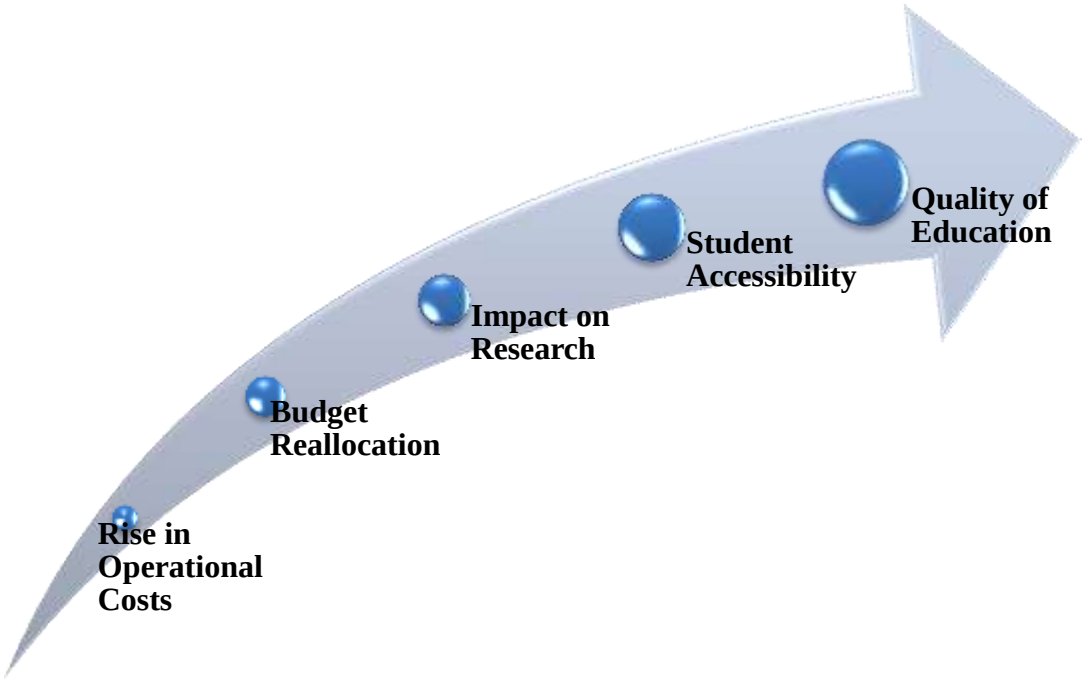


Figure 2: Projected Changes in Tertiary Institution Budgets After Subsidy Removal

To cope with the higher fuel expenses, tertiary institutions will likely need to reallocate funds from other budgetary categories. This shift in funds could impact critical areas such as academic programs, research initiatives, and student support services. For example, funding for academic materials, faculty development, and student scholarships may be reduced to accommodate the rising fuel costs (Kennedy, 2016). This budget reallocation can have long-term effects on the quality of education and the overall functioning of the institution. Research activities within universities are also expected to be affected by the removal of fuel subsidies. Many research projects require travel for data collection, fieldwork, and conferences, all of which incur fuel costs. With higher fuel prices, universities may face challenges in sustaining research budgets. This could lead to reductions in research funding or the need to seek alternative sources of funding (Guthrie et al, 2019). As a result, the pace and scope of research activities may be hindered, impacting the institution's contributions to knowledge creation and innovation.

Higher transportation costs due to fuel subsidy removal pose a direct challenge to student accessibility. Many students rely on public transportation or university-provided shuttles to commute to campuses. With increased fuel expenses, transportation fares are likely to rise, placing financial burdens on students. This can affect enrollment rates, particularly for students from low-income backgrounds, and may lead to decreased student retention rates (Ruiz-Alvarado et al, 2020). Students may face difficulties in affording transportation to and from campus, potentially impacting their ability to attend classes regularly. Perhaps one of the most significant concerns is the potential impact on the overall quality of education provided by tertiary institutions. Budget constraints resulting from fuel subsidy removal can lead to limitations in resources essential for effective teaching and learning. This includes the availability of teaching materials, maintenance of infrastructure, and support services for students. A reduction in these resources can hinder the delivery of quality education and student outcomes (Kelchen & Pingel, 2024). Universities may struggle to maintain facilities, update curriculum materials, or provide adequate support for faculty and students, ultimately affecting the educational experience.

Fuel Subsidy Removal and Academic Programs

Fuel subsidy removal has a direct impact on the functioning and sustainability of academic programs within tertiary institutions. This section delves into the overview of academic programs, the specific impact of fuel subsidy removal on these activities, potential changes that may occur, and

strategies to mitigate the negative effects. Academic programs in tertiary institutions encompass a wide range of disciplines and courses designed to educate and train students. These programs include undergraduate and postgraduate degrees, research projects, practical training, and extracurricular activities. The success and quality of these programs depend on various factors, including adequate funding, resources, faculty expertise, and infrastructure.

Impact of Fuel Subsidy Removal on Academic Activities

Fuel subsidy removal directly affects academic activities in several ways as illustrated in figure 3. Many academic programs require fieldwork, data collection, and research activities that involve travel. With the removal of fuel subsidies, the costs associated with these activities increase. As a result, research projects may face budget constraints, limiting the scope and effectiveness of the studies (Cheng et al, 2022). Some academic programs, especially in technical fields like engineering and sciences, require practical training, workshops, and laboratory sessions. These activities often rely on electricity and fuel for equipment operation. Increased fuel costs can strain the budget allocated for these practical sessions, potentially reducing their frequency or quality (Cherati & Ghasemi-Fare, 2021).

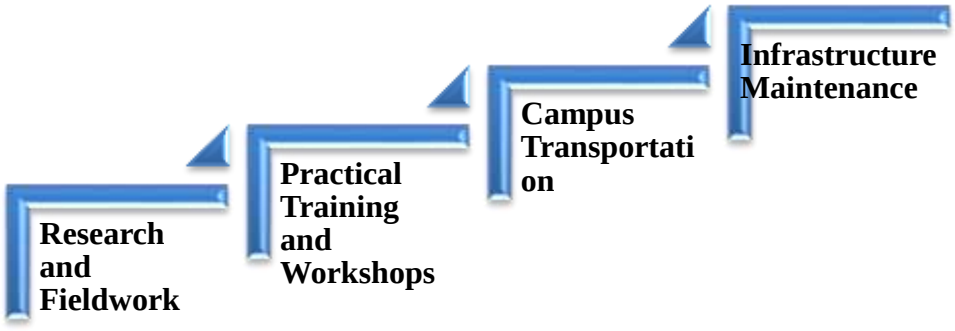


Figure 3: Impact of Fuel Subsidy Removal on Academic Activities

Universities provide transportation services for students and faculty to move around campus. Higher fuel prices result in increased transportation costs, which may impact the availability and frequency of campus shuttles. This affects students' ability to attend classes and participate in academic events (Jepson & Ryan, 2018). Proper infrastructure, such as well-equipped classrooms, laboratories, libraries, and IT facilities, is essential for effective academic programs. However, with limited budgets due to higher fuel expenses, tertiary institutions may struggle to maintain and upgrade their infrastructure, potentially hindering teaching and learning experiences.

Potential Changes in Academic Programs

The removal of fuel subsidies may lead to several changes in academic programs as summarized in figure 4. Budget constraints resulting from higher fuel costs could lead to a reduction in research opportunities for both faculty and students. Research projects may be scaled down or postponed due to financial limitations, impacting the institution's contributions to knowledge creation and innovation (Naseer et al, 2022).

Tertiary institutions may need to make adjustments to their curriculum to accommodate budget constraints. This could involve reducing the number of elective courses offered, consolidating courses with low enrollment, or focusing on core courses to optimize resources (Pokrovskaia et al, 2021). Practical training sessions and workshops that rely on fuel-dependent equipment may be affected. Institutions may need to prioritize certain practical sessions over others or seek alternative energy sources to sustain these activities (Whalen et al, 2013).

Higher transportation costs for students, reduced access to research opportunities, and potential changes in the curriculum can collectively impact the overall student experience. Students may face challenges in accessing resources, participating in extracurricular activities, and engaging fully in their academic pursuits (Barr & McClellan, 2018). After the removal of fuel subsidies,

universities experienced notable changes in their budgets. A comparison reveals varying degrees of impact depending on the institution's size, location, and existing financial structures. For example, larger universities with extensive campuses and higher transportation needs faced a more significant increase in operational costs.

Figure 4: Changes in Academic Programs arising from removal of fuel subsidies

These institutions had to allocate a larger portion of their budgets to cover rising fuel expenses, impacting other areas such as research funding and infrastructure maintenance (Naderipour et al, 2021). On the other hand, smaller universities or those located in urban areas with access to public transportation may have experienced less drastic budget changes. However, they still had to make adjustments to accommodate the increased fuel prices. Comparative analysis shows that universities in regions where fuel costs were already high due to logistical challenges faced a compounded impact, putting additional strain on their budgets (Kennedy, 2016).

Implications for Tertiary institution Management

The removal of fuel subsidies had significant implications for tertiary institution management. Comparative analysis indicates that university management faced challenges in financial planning and budget allocation. The uncertainty surrounding fuel prices and operational costs required agile financial management to adapt to changing circumstances (Guthrie et al, 2019). Universities experienced strain on their infrastructure as maintenance budgets were affected by increased fuel expenses. Comparative studies reveal that some institutions deferred maintenance projects or opted for temporary fixes to address urgent needs, potentially compromising the long-term sustainability of infrastructure (Ruiz-Alvarado et al, 2020). Furthermore, the literature highlights that universities were concerned about student accessibility, especially for those commuting to campuses. Higher transportation costs impacted student enrollment and attendance, highlighting the need for enhanced student support services (Cheng et al, 2022). Universities had to consider how these increased costs would affect their ability to attract and retain students. The strain on student finances due to higher transportation expenses could have led to decreased enrollment rates or difficulties for students in attending classes regularly.

Moreover, the management had to navigate the challenge of balancing various budgetary needs. The increased fuel costs meant that funds that would have been allocated to academic programs, research, or infrastructure development had to be redirected to cover basic operational needs. This reallocation of funds could have had implications for the overall quality of education and

research output of the institutions. Institutions also had to consider the impact on their staff, particularly those who relied on transportation for their daily commutes. Higher fuel costs meant increased expenses for staff members, which could have affected morale and job satisfaction. Retaining talented faculty and staff became a concern for many universities as they grappled with the financial implications of fuel subsidy removal.

.

Mitigating the Negative Effects on Academic Programs

The removal of fuel subsidies can have far-reaching impacts on tertiary institutions, affecting their budgets for research, academic activities, and operational costs. To navigate these challenges and mitigate the negative effects, universities can adopt several strategic approaches. These measures as captured in figure 5 not only address immediate budgetary concerns but also promote sustainability and resilience in the long term.

Universities can proactively seek alternative funding sources to compensate for reduced budgets. This includes pursuing grants from governmental and non-governmental organizations dedicated to research and education. Additionally, fostering partnerships with industries can lead to collaborative projects that provide financial support while also offering students valuable real-world experiences. Alumni donations represent another avenue for bolstering financial resources, tapping into the goodwill and loyalty of former students (Cherati & Ghasemi-Fare, 2021).

Implementing energy-saving measures is crucial for reducing fuel consumption and operational costs. Tertiary institutions can invest in renewable energy sources such as solar panels, which not only lower reliance on traditional fuels but also demonstrate a commitment to sustainability. Upgrading to energy-efficient equipment, adopting smart building technologies, and launching campus-wide energy conservation initiatives can yield significant savings over time (Shittu et al, 2024).

Collaboration is key to maximizing resources and expertise. By partnering with other institutions, research organizations, and industry stakeholders, universities can share the costs of research projects. These partnerships can also lead to joint funding opportunities and access to specialized equipment or facilities. Moreover, collaborative research fosters knowledge exchange and interdisciplinary approaches, enriching the academic experience for students and faculty alike (Soile & Mu, 2015).

Regularly reviewing and updating the curriculum is essential to align educational offerings with current resources and industry needs. Tertiary institutions should assess their course catalog, ensuring relevance and efficiency in a post-subsidy environment. This may involve integrating modules on energy conservation, sustainability, and alternative fuels into existing programs. By incorporating practical experiences, such as internships or fieldwork, students gain valuable skills while reducing the reliance on fuel-intensive activities (Okorie & Wesseh, 2024).

Figure 5: Strategies to Mitigate Negative Effects on Academic Programs

Beyond traditional funding models, universities can explore diverse income streams. This could include offering consultancy services, hosting conferences and events, and renting out facilities to external organizations. Such initiatives not only generate revenue but also enhance the institution's visibility and engagement with the broader community (Ogunode & Ukozor, 2024). Investing in staff training and capacity building can optimize resources and foster innovation. By equipping faculty and staff with the skills to adapt to changing circumstances, universities can enhance efficiency and effectiveness. Training programs focused on sustainable practices, research grant writing, and project management empower individuals to navigate the evolving academic landscape (Olaniyan & Efuntade, 2020).

Future Research Directions

As the effects of fuel subsidy removal on tertiary institution budgets and academic programs continue to unfold, there are several areas that warrant further investigation. Future research should focus on understanding the long-term impacts of these policy changes and exploring strategies to mitigate potential negative consequences. The following are areas for further investigation and recommendations for future studies:

1. Long-Term Financial Sustainability: Future research should delve into the long-term financial sustainability of tertiary institutions post-fuel subsidy removal. This includes analyzing trends in budget allocation, revenue generation, and expenditure patterns over several years (Kasimu & Ogunode, 2023). Understanding how universities adapt their financial strategies and whether they can maintain financial stability without relying on fuel subsidies is crucial.

2. Academic Program Adaptations: A comprehensive study on how academic programs have adapted to the removal of fuel subsidies is necessary. This research should explore changes in course offerings, research priorities, and teaching methodologies. Examining the impact on the curriculum, student enrollment trends, and the quality of education delivered would provide valuable insights.

3. Student Accessibility and Enrollment: Further investigation into the effects on student accessibility and enrollment is warranted. Studies could focus on how increased transportation costs affect students' decisions to enroll, commute, or attend classes (Clements et al, 2014). This research could

also explore the role of financial aid and support services in mitigating the impact on students from low-income backgrounds.

4. Infrastructure Maintenance and Development: Research on how tertiary institutions manage their infrastructure maintenance and development post-subsidy removal is essential. This includes assessing the condition of university facilities, the impact on ongoing projects, and strategies for sustaining infrastructure in the absence of fuel subsidies. Comparative studies across institutions could reveal best practices and innovative approaches.

5. Staff Retention and Morale: Future studies should examine the effects of increased fuel costs on staff retention, job satisfaction, and productivity. Understanding how universities support their staff members amid financial challenges and whether there are disparities across different roles and departments would be valuable (Okorie & Wesseh, 2024). Research could also explore the role of non-monetary incentives in retaining talented faculty and staff.

6. Policy Analysis and Recommendations: Conducting policy analysis on the broader implications of fuel subsidy removal for the education sector is crucial. This includes evaluating the policy frameworks that govern tertiary institution funding, analyzing the role of government interventions, and proposing recommendations for sustainable funding models. Comparative studies with countries that have undergone similar policy changes could offer valuable insights.

CONCLUSION

In conclusion, the analysis of the effects of the 2023 fuel subsidy removal policy on tertiary institution budgets and academic programmes in Nigeria reveals significant challenges and implications for higher education systems. The removal of fuel subsidies has led to increased operational costs, strained budgets, and potential disruptions to academic activities. Tertiary institutions face the daunting task of adapting to these changes while maintaining financial sustainability and delivering quality education. Throughout this study, it became evident that the removal of fuel subsidies has far-reaching consequences beyond just financial considerations. It impacts student accessibility, infrastructure maintenance, staff morale, and the overall quality of education provided by universities. Moreover, the policy changes necessitate innovative strategies and proactive measures from university management to mitigate negative effects and ensure continued academic excellence.

As policymakers and university administrators grapple with the complexities of post-subsidy removal environments, it is crucial to prioritize long-term sustainability and student welfare. Future research should continue to explore the evolving landscape of tertiary education in the absence of fuel subsidies, focusing on areas such as financial management, academic program adaptations, student support services, and policy analysis.

Ultimately, addressing the challenges posed by fuel subsidy removal requires collaborative efforts from all stakeholders, including government agencies, university leadership, faculty, staff, students, and the broader community. By working together to develop effective strategies and implement sustainable solutions, we can navigate these challenges and uphold the integrity and accessibility of higher education for generations to come.

REFERENCES

Akoje J (2022). NEITI: N13.7trn Spent on Fuel Subsidy in 15 Years. Retrieved 09/04/24 from https://www.thisdaylive.com/index.php/2022/09/09/neiti-n13-7trn-spent-on-fuel-subsidy-in-15-years

Barr, M. J., & McClellan, G. S. (2018). *Budgets and financial management in higher education*. John Wiley & Sons.

Cheng, D., Yuan, Y., Wu, Y., Hao, T., & Cheng, F. (2022). Maximum satisfaction consensus with budget constraints considering individual tolerance and compromise limit behaviors. *European Journal of Operational Research*, *297*(1), 221-238.

Cherati, D. Y., & Ghasemi-Fare, O. (2021). Practical approaches for implementation of energy piles in Iran based on the lessons learned from the developed countries experiences. *Renewable and sustainable energy reviews*, *140*, 110748.

Clements, B., Coady, D., Fabrizio, S., Gupta, S., & Shang, B. (2014). Energy subsidies: How large are they and how can they be reformed?. *Economics of Energy & Environmental Policy*, *3*(1), 1-18.

Guthrie, S., Rodriguez Rincon, D., McInroy, G., Ioppolo, B., & Gunashekar, S. (2019). Measuring bias, burden and conservatism in research funding processes. *F1000Research*, *8*, 851.

Haley, U. C., & Haley, G. T. (2013). *Subsidies to Chinese industry: State capitalism, business strategy, and trade policy*. Oxford University Press, USA.

Harun, M., Mat, S. H. C., Fadzim, W. R., Khan, S. J. M., & Noor, M. S. Z. (2018). The effects of fuel subsidy removal on input costs of productions: Leontief input-output price model. *International Journal of Supply Chain Management*, *7*(5), 529-534.

Isaac, L. (2014). Appraising the impact of budgeting and planning on the performance of financial institutions in Nigeria. *Research journal of finance and accounting*, *5*(16), 12-27.

Islam, M. A., Al Mamun, A., Khaled, E. U., Hasan, A., Islam, A., Islam, Z. U., & Ali, M. N. (2023, December). Techno-Economic Assessment of Electric Bus for Student Transportation Services: A Case Study. In *2023 5th International Conference on Sustainable Technologies for Industry 5.0 (STI)* (pp. 1-6). IEEE.

Jaja, A. S., Sam-Kalagbor, V. O., & Igoni, C. G. (2023). Financial Management Strategies in Public Universities in Rivers State, Nigeria. *Journal of Education in Developing Areas*, *31*(2), 480-491.

Jepson, A., & Ryan, W. G. (2018). Applying the motivation, opportunity, ability (MOA) model, and self-efficacy (SE) to better understand student engagement on undergraduate event management programs. *Event Management*, *22*(2), 271-285.

Kasimu, S., & Ogunode, N. J. (2023). Effects of Subsidy Removal on Universities Administration in Nigeria. *Amaliy Va Fundamental Tadqiqotlar Jurnali| Journal Of Applied And Fundamental Research*, *2*(7), 23-31.

Kelchen, R., & Pingel, S. (2024). Examining the Effects of Tuition Controls on Student Enrollment. *Research in Higher Education*, *65*(1), 70-91.

Kennedy, M. M. (2016). How does professional development improve teaching? *Review of educational research*, *86*(4), 945-980.

McCulloch, N. (2023). *Ending Fossil Fuel Subsidies: The politics of saving the planet*. Oxford, UK: Practical Action Publishing.

Naderipour, A., Abdul-Malek, Z., Arshad, R. N., Kamyab, H., Chelliapan, S., Ashokkumar, V., & Tavalaei, J. (2021). Assessment of carbon footprint from transportation, electricity, water, and waste generation: towards utilisation of renewable energy sources. *Clean Technologies and Environmental Policy*, *23*, 183-201.

Naseer, S., Abbass, K., Asif, M., Hashmi, H. B. A., Naseer, S., & Achim, M. V. (2022). Impact of Critical Success Factors on Project Success Through the Mediation of Knowledge Creation. *Frontiers in Psychology*, *13*, 892488.

Ogunode, N. J., & Ayeni, E. O. (2024). Tertiary institutions and peacebuilding in Nigeria. *International Journal of Diplomacy and Political Relations*, *1*(1), 1-10.

Ogunode, N. J., & Omolewa, E. B. (2023). Management Of Tertiary Institutions In Post-Subsidy Removal Era In Nigeria. *TA'LIM VA RIVOJLANISH TAHLILI ONLAYN ILMIY JURNALI*, *3*(11), 345-352.

Ogunode, N. J., & Ukozor, C. U. (2024). Impact of Subsidy Removal on Tertiary Education in Nigeria. *European Journal of Higher Education and Academic Advancement*, *1*(2), 316-325.

Ogunode, N. J., Ngezack, A. C., & Christiana, U. (2023). Issues to Urgently Address in Tertiary Institutions in Nigeria. *International Journal of Human Capital and Innovative Management*, *1*(1), 17-32.

Okorie, D. I., & Wesseh Jr, P. K. (2024). Fossil fuel subsidy removal, economic welfare, and environmental quality under alternative policy schemes. *Journal of Cleaner Production*, 141991.

Olaniyan, N. O., & Efuntade, L. O. (2020). Budget and the budgetary control system in tertiary institution's financial performance in Nigeria. *KIU Interdisciplinary Journal of Humanities and Social Sciences*, *1*(2), 281-302.

Pokrovskaia, N. N., Leontyeva, V. L., Ababkova, M. Y., Cappelli, L., & D'Ascenzo, F. (2021). Digital communication tools and knowledge creation processes for enriched intellectual outcome—experience of short-term E-learning courses during pandemic. *Future Internet*, *13*(2), 43.

Ruiz Alvarado, A., Stewart-Ambo, T., & Hurtado, S. (2020). High school and college choice factors associated with high-achieving low-income students' college degree completion. *Education Sciences*, *10*(6), 153.

Shittu, I., Latiff, A. R. A., & Baharudin, S. A. (2024). Assessing the compensation and reinvestment plans for fuel subsidy rationalization in Nigeria: A dynamic computable general equilibrium approach. *Energy*, *293*, 130671.

Soile, I., & Mu, X. (2015). Who benefit most from fuel subsidies? Evidence from Nigeria. *Energy Policy*, *87*, 314-324.

Tewe, R., Ismaila, B., Beneke, J., & Siewe, L. (2024). Perceptions on "free" tertiary education and operational budgeting within a public university in South Africa. *Social Sciences & Humanities Open*, *9*, 100793.

Whalen, K. E., Páez, A., & Carrasco, J. A. (2013). Mode choice of university students commuting to school and the role of active travel. *Journal of Transport Geography*, *31*, 132-142.

Wilson, J. (2022). Understanding the impact of state-level financial incentives on the deployment of renewable energy at colleges and universities. *The Electricity Journal*, *35*(5), 107060.

Wong, S. D., Broader, J. C., & Shaheen, S. A. (2022). Power trips: early understanding of preparedness and travel behavior during California public safety power shutoff events. *Transportation research record*, *2676*(7), 395-410.