



Petroleum Products Price Hike and Survival Small-Scale Businesses in Lagos Conventional Markets

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ABSTRACT

Nigeria's persistent fuel price fluctuation poses existential threats to small-scale businesses that depend largely on petroleum products for transportation, power generation, and daily operations. Despite being a major oil producer, Nigerian economy experiences chronic fuel price instability due to subsidy removal, exchange rate fluctuations, and global oil market dynamics, disproportionately affecting the informal sector. Therefore, the main objective of this study is to examine the effect of fuel price hike on survival of small scale businesses in selected markets in Lagos while the Theory of Constraints and Theory of Practice guided the study. Descriptive research design was adopted using qualitative means of inquiry. Forty-five indepth interviews were conducted with small-scale business entrepreneurs across the three purposively selected markets in Lagos: Iyana-Iba, Badagry, and Lagos Island, representing semi-urban, border, and urban commercial environments respectively. Data collected were analyzed through thematic content analysis and verbatim quotations supported by Nvivo (14). The study found that fuel price hikes substantially increased operational costs, particularly transportation (up to 150-250% increase) and energy generation (up to ₦30,000 daily for refrigeration-dependent businesses). Income declined sharply as consumer demand shifted toward essential goods, with non-food businesses experiencing steeper sales reductions. Entrepreneurs adopted coping strategies including collaborative transportation, local sourcing for products, alternative energy adoption (solar, gas), and flexible pricing. However, these measures provided only partial relief. Businesses in semi-urban and border areas demonstrated greater vulnerability due to limited infrastructure and access to financial support. While small-scale businesses demonstrate remarkable resilience through adaptive strategies, the absence of targeted government support and infrastructural improvements limits their capacity to withstand persistent fuel price volatility and fluctuations. Policy interventions promoting affordable alternative energy, financial inclusion, and transport efficiency are essential for enhancing business sustainability in Nigeria's informal sector

INTRODUCTION

Fuel price stability constitutes a cornerstone of economic development in petroleum-dependent economies, affecting transportation, production, and commerce across multiple sectors. In Nigeria, persistent fuel price fluctuations have emerged as a critical economic concern, with disproportionate impacts on small-scale businesses that constitute approximately 96% of all enterprises and contribute over 50% to national GDP (National Bureau of Statistics, 2021). These enterprises, forming the backbone of Nigeria's informal economy, rely heavily on fuel for transportation, generator-powered electricity due to unstable national supply, and various operational activities.

The paradox of Nigeria's fuel crisis lies in its status as Africa's largest oil producer yet experiencing chronic domestic fuel price instability. This contradiction stems from inadequate refining capacity necessitating importation of refined petroleum products, subsidy removal policies, exchange rate volatility, and global crude oil price fluctuations (Aminu & Bello, 2023). Recent policy shifts, particularly the 2023 fuel subsidy removal, triggered price increases exceeding 200%, creating unprecedented challenges for small-scale enterprises operating on narrow profit margins (World Bank, 2023). While existing research documents the economic impacts of fuel price hikes on large-scale enterprises and urban businesses (Adewale & Ayeni, 2023; Olanrewaju et al., 2022), significant gaps remain in understanding how small-scale businesses in diverse commercial environments, particularly semi-urban and border markets, navigate fuel price volatility. Furthermore, limited research examines the specific adaptive mechanisms employed by entrepreneurs in different market contexts and the effectiveness of these strategies across business types and locations.

This study addresses these gaps by investigating fuel price hike impacts on small-scale businesses in three distinct Lagos markets: Iyana-Iba (semi-urban trading hub in Ojo Local Government Area), Badagry (border community with cross-border trade links to West African countries), and Lagos Island (high-density metropolitan urban commercial center). These markets represent different socioeconomic demographics and commercial settings, providing valuable insights into how location-specific factors mediate fuel price volatility effects.

The research examines four critical dimensions: (1) effects on operational costs, (2) extent of income impacts, (3) specific challenges faced by entrepreneurs, and (4) coping strategies employed for business survival. By examining these dimensions through the lived experiences of entrepreneurs, this research contributes to understanding the complex intersection of energy policy, entrepreneurship, and economic survival within Nigeria's informal sector.

The significance extends beyond academic discourse. Small-scale businesses are critical for job creation, poverty alleviation, and economic growth in developing economies. Understanding how these enterprises respond to fuel price shocks is essential for designing targeted policy interventions that enhance business resilience and promote sustainable economic development. This study provides empirical evidence from entrepreneurs lived experiences, offering

actionable insights for policymakers, business support organizations, and stakeholders invested in strengthening Nigeria's informal economy.

LITERATURE REVIEW

Fuel Price Volatility and the Nigerian Economy

Nigeria's fuel pricing history reflects significant government intervention through subsidy regimes intended to cushion consumers from global oil market volatility. However, these subsidies have been plagued by corruption, inefficiency, and substantial fiscal burdens, prompting successive governments to implement periodic price increases and subsidy removals (Omotosho, 2020). The economic implications are multifaceted and far-reaching.

Fuel price increases exert cost-push inflationary pressures throughout the economy. Since Nigeria depends heavily on petroleum products for transportation, industrial operations, and power generation, fuel cost escalations translate directly into higher prices for goods and services (Aigbokhan, 2018). Multiple empirical studies confirm statistically significant positive correlations between fuel price changes and inflation rates in Nigeria (Nteegah & Kalu, 2024). This inflationary spiral particularly affects low-income households that spend disproportionate shares of income on transportation and essentials, potentially pushing them below poverty lines and exacerbating existing inequalities (Ogundipe, Alege and Ishola, 2021).

Impacts on Small-Scale Businesses

Small-scale businesses, forming the backbone of Nigeria's informal economy, have been severely affected by fuel price increases. Adewale and Ayeni (2023) found that fuel price hikes in Lagos led to significant profitability declines and increased business closures, with rising transportation and energy expenses eroding profit margins. Olanrewaju, Adebayo, and Okafor, (2022) noted that increased operational costs, reduced access to raw materials, and supply chain disruptions disproportionately affect small and medium-sized enterprises (SMEs), especially in rural and semi-urban areas lacking alternative energy sources.

Aminu and Bello (2022) demonstrated a strong negative correlation between fuel price increases and micro-enterprise profitability, emphasizing vulnerability of businesses operating on narrow margins. The authors highlighted lack of adaptive capacity among these businesses, as many lack financial resources to invest in energy-efficient technologies or alternative transportation methods.

Transportation sector experiences the most direct impact. Rising fuel costs immediately increase operational expenses for transporters, leading to higher fares and freight charges that contribute to inflationary pressures, reduce profitability, and may result in job losses and service quality deterioration (Ocheni, 2015). For businesses dependent on transportation networks, these increases cascade through supply chains, affecting procurement costs and market access.

Subsidy Removal and Economic Consequences

The removal of fuel subsidies has been particularly contentious. While proponents argue subsidy removal promotes market efficiency and reduces fiscal deficits, critics emphasize adverse effects on inflation, household welfare, and business operations (Adebayo, 2021). Okonkwo and Salisu (2020) found that although subsidy removal creates short-term economic disruptions, it can generate long-term benefits through increased government revenue redirected toward critical sectors. However, success depends largely on effective accompanying policy measures, including social protection programs and alternative energy investments.

Empirical studies (Adebayo, 2021. Adebayo and Olayemi, 2021, Eze and Akinwale, 2019) demonstrate that subsidy removal leads to immediate fuel price increases, raising costs of transportation, production, and essential goods. When fuel prices increase, businesses pass these costs to consumers, reducing overall purchasing power and contributing to economic hardship, particularly among low- and middle-income households (Adebayo, 2021; Adebayo and Olayemi, 2021).

Coping Mechanisms and Adaptive Strategies

Research identifies various strategies businesses employ to mitigate fuel price impacts. Nwankwo et al. (2023) found that small-scale businesses reduce operational hours, increase product prices, or diversify income sources. However, these strategies often prove insufficient for long-term sustainability. Olaniyan and Akinyemi (2022) documented shifts toward energy-efficient alternatives (solar power, inverters) and pricing structure adjustments, noting that strategy effectiveness varies by business type, location, and financial resource access.

Adeyemi and Ogunrinola (2020) emphasized the role of government policies in shaping adaptive capacity, arguing that effective interventions such as targeted subsidies, social safety nets, and infrastructure investments are essential for supporting vulnerable sectors and ensuring economic resilience.

Theoretical Orientation

This study employs two complementary theoretical frameworks: the Theory of Constraints (TOC) and Bourdieu's Theory of Practice.

Theory of Constraints (Goldratt, 1984)

The Theory of Constraints, developed by Eliyahu Goldratt (1984), posits that every system has at least one constraint limiting its performance. For small-scale businesses, fuel price hikes create constraints that restrict profitability and sustainability. TOC's five-step focusing process identify the constraint, exploit it, subordinate everything else, elevate the constraint, and repeat provides a systematic approach for understanding how businesses can manage fuel-related constraints.

By identifying fuel costs as bottlenecks affecting transportation, energy generation, and procurement, businesses can develop targeted strategies to maximize throughput while minimizing operational costs (Rahman, 1998;

Watson et al., 2007). In Lagos State, fuel price increases result in several constraints: increased operating costs restricting profitability, decreased demand as living expenses reduce consumer spending on non-essentials, and cash flow issues from alternative energy investments and delayed payments.

Theory of Practice(Bourdieu, 1977)

Pierre Bourdieu's framework examines how individuals navigate social structures through habitus (internalized dispositions), field (social arenas of competition), and capital (economic, cultural, social resources). Applied to small businesses, this theory illuminates how entrepreneurs' responses to fuel price hikes are shaped by their social positions, available resources, and market contexts (Bourdieu, 1977).

Fuel represents a critical material element embedded in daily business practices. Price increases disrupt established routines, forcing entrepreneurs to make complex adjustments influenced by their habitus and available capital forms. The Theory of Practice provides a framework for connecting small business owners' micro-level operations to macro-level structures influencing their operating environment. Fuel price increases result from intricate relationships between international oil markets, national economic policy, and local market dynamics rather than being merely exogenous shocks.

METHODOLOGY

This study adopted descriptive research design to explore lived experiences, perceptions, and coping strategies of small-scale entrepreneurs affected by fuel price hikes using qualitative means of inquiry. A qualitative approach provides detailed understanding of complex socio-economic realities surrounding small-scale business operations in volatile economic environments.

Research was conducted in three major Lagos State markets purposively selected to represent diverse commercial contexts: Iyana-Iba Market (Ojo Local Government Area), a bustling semi-urban trading center; Badagry Market, a key cross-border trade point where goods are transported to and from neighboring countries; and Lagos Island Market, one of Nigeria's largest commercial districts with mixed wholesale and retail businesses. These markets collectively represent semi-urban, border community, and high-density urban trading environments.

The study population consisted of small-scale business owners and operators, including traders in perishable goods, non-perishable goods, clothing, electronics, and small-scale service providers. A total of 45 participants were engaged (15 from each market) through purposive sampling to select individuals meeting inclusion criteria: (1) owned or actively managed a small-scale business, (2) had at least one year of continuous operational experience, and (3) were directly involved in decisions on sourcing, pricing, and operational adjustments. Snowball sampling supplemented participant recruitment.

Primary data were collected through in-depth interviews using a semi-structured interview guide covering: (1) socio-demographic characteristics, (2) effects of fuel price hikes on operational costs, (3) extent of income impacts, (4)

specific challenges faced, and (5) coping strategies employed. Interviews were conducted face-to-face at participants' business premises, lasting 30-45 minutes each. With participants' informed consent, sessions were audio-recorded, supplemented by field notes capturing non-verbal cues and contextual observations.

Data were analyzed using thematic content analysis. Audio recordings were transcribed verbatim, and transcripts were reviewed repeatedly to ensure familiarity with content. Codes were developed from recurring words, phrases, and concepts, then grouped into themes aligned with study objectives. Findings were supported by direct quotations from participants to authentically reflect their lived experiences.

Ethical standards were maintained throughout the study. Participants were informed about the research purpose, their right to withdraw, and measures protecting their identity. Informed consent was obtained before each interview, and pseudonyms were used in reporting to ensure anonymity. All data were securely stored and used solely for academic purposes.

RESULT

Socio-Demographic Profile

The 45 participants comprised 30 females and 15 males, with ages ranging from 20-30 years (8), 31-40 years (15), 41-50 years (12), and 51+ years (10). Religious affiliation included 25 Muslims and 20 Christians. Educational qualifications varied: primary education (10), secondary education (22), tertiary education (6), and no formal education (7). Ethnically, 24 identified as Yoruba, 19 as Igbo, and 2 as Hausa. Occupations included pepper sellers (9), clothing vendors (5), foodstuff traders (5), computer repair/electronics (4), fish sellers (5), vegetable/fruit sellers (6), and various other small-scale enterprises.

Effect of Fuel Price Hikes on Operational Costs

Participants overwhelmingly reported that fuel price hikes dramatically increased operational costs, particularly transportation and energy expenses. A pepper seller from Badagry with ten years of business experience explained:

I've been selling fresh and spicy peppers in Iyana-Iba market for the past ten years. The increase in fuel prices has hit me so hard in terms of procuring my pepper from my supplier. Transporting peppers from farms to the market has become more expensive, and the higher fuel prices have a direct impact on the overall cost of acquiring the peppers I sell. *(IDI/Female/37years/Pepper Seller/Badagry)*

Transportation cost increases ranged from 150% to over 250% for some businesses, fundamentally altering procurement economics. A yam trader from Iyana-Iba stated:

I have been selling yam for close to five (5) years now. I face a lot of problems trying to get these goods because of the increase in fuel prices. The cost of fuel price has affected my business. I can barely get my goods due to transport issue *(IDI/Female/51years/Yam Trader/Iyana-iba)*

Energy costs for businesses requiring refrigeration or constant power proved particularly burdensome. A frozen food retailer in Lagos Island revealed:

Maintaining our cold storage has become nearly impossible. We spend about ₦30,000 daily on diesel just to keep our freezers running, money that should go to stock expansion. Many of my colleagues have closed down completely (*IDI/Female/39years/Frozen Food Retailer/Lagos Island*)

These operational cost increases created cascading effects. Businesses struggled to adjust pricing without losing customers. A vegetable seller from Badagry explained the dilemma:

If the fuel price goes up, I have no choice than to also increase the cost of my goods as the cost of transportation that I will use and carry my vegetables from the farm to the market would have also increased because I get my goods from the farm (*IDI/Female/41years/Vegetable Seller/Badagry*)

However, pricing adjustments risked customer loss. A fruit seller from Iyana-Iba highlighted pricing challenges:

In Badagry market, the fuel price increase has influenced the cost of goods. I struggle to make changes in the amount of fairly-used clothes that I buy and the prices at which I sell them because the prices of things keep increasing every day. Every time I go to the market to get my goods, I won't meet the price of the fairly-used clothes at the same price that I met it the last time so I tend to buy fewer clothes than I had intended to buy. When I eventually bring it to the market to sell, I struggle to set certain prices on it because if it is too cost then people won't be able to buy them (*IDI/Male/50years/Fruit Seller/Iyana-iba*)

A frozen food vendor in Lagos Island described operational adjustments:

Where we used to make three delivery runs daily, we now do just one to save fuel. Even then, we've had to add a transport surcharge that's driving customers away. The worst part is seeing our regular customers come less frequently because they can't afford our new prices (*IDI/Female/45years/Frozen Food Vendor/Lagos Island*)

Income Reduction and Sales Decline

Fuel price hikes substantially reduced business income through decreased customer demand and eroded profit margins. Most participants observed shifts in consumer purchasing behavior, with customers prioritizing essential goods over discretionary items. An electronics vendor from Badagry noted changing consumer preferences:

Yes, I noticed a shift in customer demand since the recent fuel price increase. There's been an increased demand for energy-efficient products like LED bulbs and solar-powered devices assist them in the use of their computer system. Customers seem more conscious of their energy consumption and are opting for cost-effective solutions (*IDI/Male/33years/Electronics Vendor/Badagry*)

Non-food businesses experienced steeper sales declines. A computer repairer from Iyana-Iba shared:

Since the recent increase in fuel prices, our computer repair and hardware business in Iyana-Iba has experienced a noticeable impact. Customers now demand less service. They hardly even buy computer parts due to the fact that the amount they are supposed to use to buy three things is now being used to buy just one thing. The rise in transportation costs for our suppliers has led to an

increase in the prices of computer components and parts. As a result, our profits have been reduced, and we've had to adjust our prices accordingly. We're working hard to maintain the quality of our services, but the economic challenges posed by the fuel price hike have made it difficult for me to make better profit. (IDI/Male/39yrs/Computer Repairer/Iyana-iba)

A Lagos Island restaurant owner reported dramatic sales reductions:

Where we used to serve 150 meals daily, we now struggle to sell 80. People are cutting back on eating out, and those who do come order smaller portions. Our delivery service has become unsustainable, the fuel costs eat up all our profits, but we can't stop it because it accounts for 30% of our business (IDI/Male/41years/Restaurant Owner/Lagos Island)

Even businesses selling essential goods struggled with profitability. A foodstuff vendor from Badagry explained:

Fortunately, my business has not experienced a significant decrease in sales despite the recent rise in fuel prices because it is foodstuffs that I am selling and no matter people always buy. At the end of the day there is barely enough profit left for me as I have spent everything on transport. For example, I get my palm oil from the east and before the fuel price increased I use just #10,000 to transport my goods down to Badagry market here but now I use over #25,000 to transport. At the end of the day, I am barely able to make profit and even the profits I made are not sustainable at all (IDI/Female/43years/Foodstuff Vendor/Badagry)

A shoe seller from Iyana-Iba described the severity of income decline:

With the high cost of things at the moment, people would rather use the little money that they have to buy what they will eat than to use it and buy shoes. I have offer discounts to attract customers and done all sorts of things so as to sell my shoes yet the number of sales I get have reduced a lot. Sometimes, I only get to make sales that can only be enough for my transport from my house to the market. I have two children in the university and it is very difficult for me to take care of them because of how things are at the moment. The profits I make from here is nowhere near sustainable (IDI/Male/36years/Shoe Seller/Iyana-iba)

A fashion boutique owner in Lagos Island explained product mix changes:

We now sell mostly cheaper, local designs instead of imported ones because of the 300% increase in shipping costs. Even then, our sales are half what they used to be. What hurts most is that our loyal customers who used to buy regularly now only window-shop, waiting for sales that we can't afford to give (IDI/Female/39years/Fashion Store Owner/Lagos Island)

Challenges Faced by Entrepreneurs

Beyond direct cost and income impacts, entrepreneurs faced multiple interrelated challenges. Transportation costs and increased market dues posed persistent problems. A foodstuff vendor from Badagry explained:

Transportation fare has been my major challenge. Since the fuel price has increased and the cost of transporting my palm oil from the east down to Badagry market here has also increased, I now try to buy in large quantity so as to avoid spending too much on transport. I also try to not make my market too costly so that people will be able to afford it and that will also make my market to sell fast. We are all struggling to make ends meet so at this period, we just have to help ourselves. Also, those that collect ticket dues from us are always demanding a lot

of money and I don't have any choice but to pay (*IDI/Female/32 years/Foodstuff Vendor/Badagry*)

Electricity costs compounded difficulties for service businesses. A barber from Iyana-Iba shared:

I run a barbing saloon business and the challenges I faced as an entrepreneur has increased a lot due to this fuel price issue. I use fuel for almost everything in my business, to power on my generator which I will use to power on my clipper as there is not always electricity. I also play music every time because if my shop is not lively, guys will hardly want to come and barb. So, I need to keep my generator running always. I can say that this fuel price increase is my major challenge as an entrepreneur because of the huge amount I spend every day on fuel and also the electricity bill. So, I have started using solar energy in my shop so as to reduce the cost of fuel (*IDI/Male/44 years/Barber/Iyana-Iba*)

A Lagos Island computer accessories dealer highlighted increased administrative levies:

The ports clearance and delivery costs have tripled since the fuel hike. What shocks me most is how LAWMA and local council officials now demand double the usual fees, claiming 'operational costs have increased'. I pay ₦15,000 weekly just to keep my shop open, on top of all other expenses (*IDI/Female/37 years/Computer Accessories Dealer/Lagos Island*)

Others maintained cautious optimism. A clothes vendor from Iyana-Iba explained:

It is not easy to set new prices every time due to the fuel price that keeps increasing. I get my fairly-used clothes from a different country so I tend to spend more on transport than others. Since it is fairly-used clothes, it is supposed to be lesser so people won't want to accept the fact that it is also now costly. Customers sometimes would even tell me that they would rather buy new clothes at a higher price than buy used-clothes at a higher price. So, it is really a struggle for me when trying to adjust my prices and make my profit, which makes it a bit difficult for small businesses to grow. I believe with resilience and help from God Almighty; it will be possible for small-businesses to grow (*IDI/Female/47 years/Clothes Vendor/Iyana-Iba*)

Coping Strategies Employed

Participants employed diverse adaptive strategies with varying success. Collaborative transportation emerged as the most common approach. A trader from Iyana-Iba explained:

I have tried to collaborate with other people that are also buying their palm oil from the east so that we can transport our goods together and that has reduced the amount of money I spend on transportation (*IDI/Female/23 years/Iyana-Iba*)

A frozen food retailer in Lagos Island described more elaborate collaboration:

Instead of daily deliveries, we now operate a centralized cold storage system with neighboring businesses. We take turns making weekly bulk purchases and store together. It cuts our individual fuel costs by about 60% and

reduces generator running time (*IDI/Female/38 years/Frozen Food Retailer/Lagos Island*)

Local sourcing provided another adaptation mechanism. A pepper seller from Badagry noted:

To reduce the challenges posed by fuel price hike, I have tried to source peppers from local suppliers like farmers within Iyana-Iba. This has reduced transportation costs and allowed me to offer fair prices to my customers (*IDI/Female/34 years/Pepper Seller/Badagry*)

Alternative energy adoption included shifts to solar and gas. A barber from Iyana-Iba shared:

I did try out other alternatives like installing solar in my shop, since the price of petrol have gone up a lot so I had to switch to using solar power for barbing hair for people. I have had peace of mind since I started using solar. Since I switched to using solar, I don't think I have faced any challenges but the only challenge I can talk about is weather. When there is no sun, the solar doesn't have enough power to power anything in my shop (*IDI/Male/34 years/Barber/Iyana-Iba*) However, alternative fuel sources faced challenges. A soft-drink seller from Badagry cautioned:

When the fuel subsidy was removed and the price of fuel increased a lot of people including me switched to using gas to power on my generator instead of petrol because gas was cheap compared to petrol. Being an owner of a soft drink shop, I need to keep my generator running all the time so as to ice my drinks. Also, I read somewhere online that using gas to power on generator is actually safer than petrol and I have never faced any challenges at all in trying to get gas but the issue now is that since a lot of people have shifted to using gas, the price of gas has also gone up. So, it's now like fuel price is lesser than gas price now.

IDI/Female/52 years/Drinks Vendor/Badagry

Bulk purchasing through associations provided economies of scale. A Lagos Island textile merchant noted:

Joining the traders' association bulk purchase scheme has helped us survive. We now get better prices by ordering container loads together, though the fuel costs still hurt our margins badly (*IDI/Male/47 years/Textile Merchant/Lagos Island*)

Despite these adaptations, most participants indicated strategies provided only partial relief. A respondent from Iyana-Iba summarized:

I can't really say it is that successful but for now, collaborating with other business entrepreneurs and bringing down our goods together down to the market seem to be the best solution for now. Somehow it has managed to reduce the transportation (*IDI/Female/56 years/Iyana-Ib*)

DISCUSSION

Findings confirm that fuel price hikes create substantial operational cost pressures for small-scale businesses, consistent with economic theory positing direct and multiplier effects of fuel costs on commodity prices and operational expenditures (Okonkwo & Uzochukwu, 2020). Transportation emerged as the primary cost driver, particularly for businesses sourcing goods from distant locations. Reported cost increases of 150-250% align with broader patterns observed in Nigeria's informal economy during fuel subsidy removal periods (World Bank, 2023).

Agricultural supply chain businesses demonstrated particular vulnerability, supporting Nwosu and Ogujiuba's (2019) findings that fuel price fluctuations trigger ripple effects on commodity affordability and availability. Extreme daily expenses reported by frozen food vendors (up to ₦30,000 for diesel) illustrate how energy-intensive businesses face existential threats from sustained fuel price volatility, often reducing operational capacity and service delivery (Adebayo & Olayemi, 2021).

Adaptive yet strained pricing strategies observed reflect what Adeyemi (2018) termed the "price dilemma" facing micro-enterprises in inflationary contexts: balancing customer affordability with business sustainability. Businesses unwilling or unable to increase prices sufficiently to cover costs experienced progressive profit margin erosion, while those implementing significant price increases risked customer loss in price-sensitive markets.

Substantial income reductions reported across business types demonstrate both supply-side effects (increased input costs) and demand-side effects (reduced consumer purchasing power), creating dual constraints on business income (Babatunde & Oni, 2020). Observed consumer behavior shifts prioritizing essentials over discretionary goods—support Adeyemi's (2018) argument that during economic strain, demand becomes inelastic for necessities but highly elastic for non-essentials, causing disproportionate income shocks for discretionary goods traders.

Critically, even businesses experiencing stable demand for essential goods reported unsustainable profitability due to inflated logistics costs consuming profit margins. This demonstrates that income vulnerability results not solely from sales volume changes but from underlying cost structure transformations (Eze & Akinwale, 2019). High fixed costs, particularly for transportation and energy, have become structural barriers to business viability.

These findings have significant implications for household welfare, as declining business income directly affects families' capacity to meet basic needs, including children's education and daily living expenses. This linkage between macroeconomic shocks and household-level vulnerability underscores broader developmental challenges facing Nigeria's informal sector (Ogundipe et al., 2021).

Market location mediated impact severity. Lagos Island businesses reported higher baseline costs and sharper customer visit declines due to increased prices, consistent with Babatunde and Oni's (2020) assertion that urban

traders are more susceptible to sudden cost escalations given dependency on high-volume supply replenishment. Badagry's border market context created unique vulnerabilities related to cross-border trade competitiveness and longer supply chains (Adesina & Okonkwo, 2023).

Sectoral differences were equally pronounced. Service businesses requiring constant power (barbers, restaurants) faced higher energy costs, while traders in discretionary goods experienced steeper demand reductions than essential goods traders. These patterns highlight uneven distribution of fuel price shock impacts across Nigeria's economic sectors, necessitating differentiated policy responses (Okonkwo & Eze, 2023).

Diverse coping strategies employed demonstrate "collective resilience" wherein small businesses leverage cooperation and resource-sharing to reduce operational burdens (Omotayo & Akinbode, 2020). Collaborative transportation and centralized storage arrangements effectively reduced per-unit logistics costs, supporting Ezeh and Nwachukwu's (2018) findings that cooperative distribution models significantly lower fixed logistics costs in informal markets.

Local sourcing strategies not only minimized fuel expenditure but also fostered stronger local economic linkages (Oghojafor et al., 2019). However, alternative energy adoption effectiveness proved mixed. While solar provided reliable, cost-free power post-installation, weather dependency and initial capital requirements limited accessibility. Gas initially offered cost advantages but experienced demand-driven price increases, illustrating how market dynamics can neutralize adaptive substitution strategies.

Association-based bulk purchasing demonstrated significant potential for strengthening negotiating power and reducing unit costs (Okonkwo & Uzochukwu, 2020). However, overwhelming consensus that strategies provided only partial relief indicates coping mechanisms in informal enterprises tend to be palliative rather than transformative, ensuring survival but not guaranteeing growth (Babatunde & Oni, 2020).

CONCLUSION

This study demonstrates that fuel price hikes exert profound, multifaceted impacts on small-scale business survival in Lagos markets. Operational costs increase substantially, particularly for transportation (150-250% increases) and energy generation (up to ₦30,000 daily for some enterprises). These cost escalations erode profit margins, reduce business income, and threaten long-term viability, with effects varying by business type, market location, and available resources.

Consumer demand shifts toward essential goods during fuel price volatility periods, disproportionately affecting businesses selling discretionary products. Even essential goods traders experience profitability challenges as inflated logistics costs consume revenue. Entrepreneurs employ diverse coping strategies—collaborative transportation, local sourcing, alternative energy adoption, flexible pricing, and association-based bulk purchasing—demonstrating remarkable resilience. However, these strategies provide only

partial relief and are insufficient to fully counteract persistent fuel price volatility impacts.

Geographical context significantly mediates impact severity. Border markets like Badagry face unique challenges related to cross-border trade competitiveness, while urban markets like Lagos Island experience higher baseline costs and sharper demand fluctuations. Semi-urban markets like Iyana-Iba contend with infrastructure deficiencies limiting access to alternative energy and financial services.

Critically, absence of targeted government support and infrastructural improvements limits small-scale businesses' capacity to withstand persistent fuel price shocks. Without strategic interventions addressing transportation costs, energy access, financial inclusion, and market infrastructure, many businesses will struggle to survive, with significant implications for employment, poverty alleviation, and economic development in Nigeria's informal sector.

RECOMMENDATIONS

For Policymakers:

1. **Subsidized Transportation Programs:** Implement targeted transport subsidies or fuel vouchers for traders in essential commodities, particularly perishable goods, to stabilize supply chains and prevent excessive cost transfer to consumers.
2. **Alternative Energy Infrastructure:** Invest in renewable energy infrastructure, including solar installation programs with subsidized financing for small businesses, to reduce dependence on fuel-powered generators and lower operational costs.
3. **Financial Inclusion Initiatives:** Establish microcredit and low-interest loan schemes specifically for small-scale traders to acquire energy-efficient equipment, participate in bulk purchasing, or transition to sustainable business models.
4. **Market Infrastructure Development:** Improve transportation networks, electricity supply, and cold storage facilities in markets to reduce operational dependencies on fuel and enhance business efficiency.
5. **Regulatory Reform:** Standardize and regulate market dues and administrative levies to prevent exploitative fee increases during economic shocks, protecting businesses from compounded financial pressures.

For Entrepreneurs:

1. **Diversify Supply Sources:** Identify and cultivate relationships with local suppliers where feasible to minimize transportation costs and reduce exposure to fuel price fluctuations.
2. **Energy Efficiency Investments:** Explore alternative energy solutions including solar systems, inverters, and gas-powered equipment, prioritizing options with favorable cost-benefit ratios and weather reliability.
3. **Strategic Collaboration:** Participate in cooperative arrangements for transportation, storage, and purchasing to share costs and strengthen negotiating positions with suppliers and service providers.
4. **Flexible Business Models:** Implement dynamic pricing strategies, adjust operational hours based on energy costs, and consider product diversification to maintain revenue streams during demand fluctuations.

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