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Artisanal Crude Oil Refining: Interrogating its non-Formalisation vis-à-vis Nigeria's Dependence on Petroleum Products Importation

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Abstract

The downstream sector of the oil industry is critical in the Nigerian economy. It consists of four refineries with a total daily refining capacity of 445,000 barrels. At about sixty percent production, the refineries once met most of the country's petroleum product needs. Lack of maintenance and cumulative neglect however led to their collapse and Nigeria's near total dependence on the import of petroleum products for domestic consumption. This gave rise, among other ills, to the proliferation of unlicensed artisanal refineries in the oil producing communities of the Niger Delta, with associated environmental hazards and the perpetuation of an obnoxious subsidy regime by agents of the Nigerian state and their collaborators. Though the state has continued to clamp down on the artisanal refineries, the fuel subsidy regime which has cost the country billions of dollars in revenue still persists. Opinions are sharply divided in the extant literature on the activities of these artisanal refineries and the government's responses to them. This paper argues for the formalisation of the activities of the artisanal refineries within the context of fundamental reforms in Nigeria's downstream sector.

Keywords: informal oil refining, fuel subsidy, oil bunkering, fuel import dependence, foreign refineries

Introduction

The discovery of crude oil in commercial quantity in Oloibiri in the present day Bayelsa State in 1956, and in Umuechem in 1958, has proved to be a major source of revenue and the mainstay of the Nigerian economy. Nigeria is sub-Saharan Africa's largest producer of crude oil, a member of the Organisation of Petroleum Exporting Countries (OPEC), and a leading exporter of crude oil (Salau, 2011). Since the discovery of oil in the country, multinational oil corporations (MNCs) have held sway in the upstream sector of the industry while the downstream has been the exclusive domain of Nigeria's national oil company, the Nigeria National Petroleum Corporation (NNPC). Aside from occasional security challenges which have disrupted crude oil production from time to time, the upstream sector has operated maximally but the downstream sector, which involves the refining crude oil into several products for local consumption, has fared poorly.

The Federal government through the NNPC had established and operated four refineries: Port-Harcourt Refinery; Eleme Petro-chemical refinery; Warri refinery, and the Kaduna refinery located thousands of kilometres away in Nigeria's North West. These refineries, constructed between 1965 and 1989, have a combined daily refining capacity of 445,000 barrels when fully operational (Ogele & Egobueze, 2020). At their peak, the four refineries produced between 57 percent and 89 percent of total domestic consumption of petroleum products within the country. During the early 1990's, Nigeria refineries produced enough refined petroleum products to satisfy consumer demand (FGN, 2013).

However, as a result of cumulative neglect and lack of maintenance, these refineries performed sub-optimally for a number of years before eventually breaking down altogether. As a result, the NNPC has resorted to the importation of all the country's refined petroleum needs, uniquely among OPEC members and even non-OPEC petroleum exporting countries. Perhaps nothing better illustrates the country's weak economic position than this paradox of being both a crude oil exporter and an importer of refined products. The process of importation has itself been riddled with extreme corruption. Nigeria's Minister of State for Petroleum from 2019 to 2023, Timipre Sylva, described it as "a criminal enterprise" (Olawoyin, 2022). In addition, many of the importers, in connivance with unscrupulous government officials or their cronies, have behaved in the manner of cartels with vested interest in ensuring that the refineries do not function (Ovaga, 2010; Chikwem, 2014). These cartels sabotage every attempt to fix the existing refineries (Enang, 2022).

Another major consequence of the non-functionality of Nigeria's refineries is the proliferation of artisanal petroleum refineries in the creeks in oil-bearing communities of the Niger Delta region. Lack of engagement, poverty, and many years of government neglect of the region, with worsening unemployment in the midst of obvious affluence from oil exploitation, have intersected with the failure of the state-owned refineries and given rise to the flurry of artisanal refining operations in the region and the risks associated with them. The artisanal refining is generally sub-standard and below internationally acceptable standards for environmental protection and sustainability. This has led to clamp down against their operations by government regulatory and security agencies and the criminalisation of their activities by the Nigerian state through legislation.

Opinion is however divided on the operations of these artisanal refineries and the government's responses to them. Arguing from environmental protection perspective, some commentators have commended the government's clamp down, insisting that the activities of these illegal refiners should be completely abolished because of their despoliation of the environment. Onuh et al. (2021), for instance, argue that the proliferation of artisanal refineries in the region has brought negative effects on the environment with attendant long-term impacts on the atmosphere. Obenade and Amangabara (2014, p. 27) further argue that "the process of artisanal refining incurs reckless wastage of oil, such that two drums of crude oil can translate to only one drum of refined products, with the rest as waste". The waste oils are then dumped haphazardly on land, rivers and streams, causing severe damage to the environment and public health. Accidents, fires and explosions occur as a result of illicit distillery processes involving open fires fed by crude oil tipped into pits in the ground. Emissions from artisanal oil exploration activities (drilling, bunkering, pipeline vandalism, gas flaring) perpetrated in the mangroves have costly environmental implications for a region that hosts one of the most bio-diverse ecosystems in the world (Onyena and Sam, 2020). Additionally, significant quantities of oil are spilt on land and creeks from broken pipes used by numerous makeshift refineries in the region (Obenade and Amangabara, 2014). The operations of the artisanal refineries are also said to be in contravention of the Petroleum Refining Regulation Act of 1974 (S. 7), which states that "no refinery shall be operated or constructed in Nigeria without a license granted by the minister" (Ogele & Egobueze, 2020).

Despite these negatives, there are those who argue instead for the legalisation of artisanal oil refining rather than its abolition or even the ongoing clampdown. Such scholars blame the situation on oil cabals comprising major players in the oil industry as well as government officials who have colluded to hijack the industry. The scholars argue that because of their easy access to government subsidy on imported refined products, members of the cabal profit more from importation of refined products than they would from local refining of products by the government-owned refineries. As a result, they have continued to undermine the functionality of the government-owned refineries (Ugwueze et al., 2024). These scholars thus canvas the legalisation of the operations of artisanal refineries so as to engage the army of unemployed youths in the Niger Delta and also to reduce the waste associated with petroleum subsidy (Enang, 2022). They further argue that the pollution arising from the activities of the artisanal refiners is minute when compared to that from the multinational oil corporations whose operations often result in oil spill and environmental degradation without corresponding compensation or attempts at remediation (Obenade and Amangabara, 2012; Ugwueze et al., 2024).

This paper mediates this raging debate. It argues for a legitimisation of the activities of the artisanal refineries by mainstreaming them into a modular refinery scheme within the larger context of a general reform of Nigeria's downstream oil industry. This will help reduce Nigeria's dependence of importation of petroleum products and also arrest the current state of mindless looting of the nation's treasury through a highly dubious fuel subsidy regime. This study relied on secondary data sources, such as books, journal articles, periodicals and other relevant materials that dwell on artisanal oil refineries, crude oil theft and environmental degradation. Content analysis was applied to analyse the generated data. The rest of the paper is presented under the following headings: conceptualizing informal refineries; the reasons for non-formalization of the informal refineries; theoretical framework; the imperatives of formalization of informal oil refineries; reducing fuel import dependency; and conclusions.

Conceptualizing the informal refinery

Informal **(**artisanal) refining also referred to as 'bush burning, cooking or *Kpofire* by the locals is a small-scale or subsistent distillation of crude petroleum over a specific range of boiling points, to produce useable products such as Kerosene, fuel, and diesel' (John & Nnadozie, p. 117). These miniature petroleum manufacturing enterprises are often beyond the reach of the state (Kyari, 2022). Refineries can be classified as informal or artisanal when the sources of raw material (crude oil) are derived through illegal means or modes of operations that are sub-standard (Mamudu et al, 2020). Such refineries acquire crude oil through bunkering and theft, for example by installing taps on the government pipeline for the unauthorised extraction of oil. The siphoned crude oil is transferred into large rubber cans and conveyed to the refining camp where it is poured into metal tanks and cooked with fire, with the vapour from the boiling oil channelled out by pipes connected to a condenser. A pipe with bigger diameter then carries the refined products to receiver points for distribution and sales (SDN, 2013). There are problems associated with informal refineries, including air, land and water pollution, explosion, and loss of revenue and damage to governmental infrastructure as well as the poor quality of the products from such refineries which may damage car engines and other machineries in which they are used.

However, with government commitment and operational adjustment, a positive outcome can be achieved. We argue that even if government did not license the artisanal refineries in their current state, it can tap into the expertise of the operators to establish modular refineries, which will in turn provide lucrative jobs for the large army of unemployed youths in the Nige Delta that readily supply the owners of illegal refineries owners with the manpower they need to perpetuate their illicit activities.

Reasons for non-formalisation of the informal refineries

Nigerian policy makers and some environmental rights activists have, apparently persuasively, attributed the non-formalization of the informal or artisanal refineries to the crude nature of their operations and the environmental hazards they pose. They also point to the illegal means through which the operators obtain the crude oil they refine, mainly through illegal bunkering or tapping into government or oil company pipelines. These reasons appear germane, but a probing of the issues reveals that the non-formalization of informal crude oil refineries is actually predicated on the nature and character of Nigerian State and the rent seeking high profile government officials and their social networks that benefit from current policies around oil.

Over the past three decades, the Nigerian state has progressively been unable to operate its four oil refineries but has instead relied almost entirely on importation to meet its domestic petroleum products consumption needs. Table 1 indicates the volume of Nigeria's petrol imports from various foreign refineries over the past three decades while Table 2 highlights the level of Nigeria's on fuel imports from both oil producing and non-oil producing countries.

Table 1: Petroleum Volumes Imported from Foreign Refineries by NNPC/Independent Marketers

S/No	Country of Origin	PMS (Ltrs)
1	NNPC/PPMC (sources not available)	679,805,778.31
2	Belgium	50,462,441.49
3	Estonia	36,138,728.35
4	France	107,960,853.40
5	Israel	28,769,641.01
6	Latvia	25,445,458.91
7	Lithuania	10,694,842.43
8	Netherlands	188,604,619.40
9	United Kingdom	40,752,476.40
	Total	**1,168,634,839.69**

Source: Adapted from PPRA Monthly Review of Operation activities, 2018

Table 2: Nigeria's Dependence on Foreign Countries for Fuel Importation

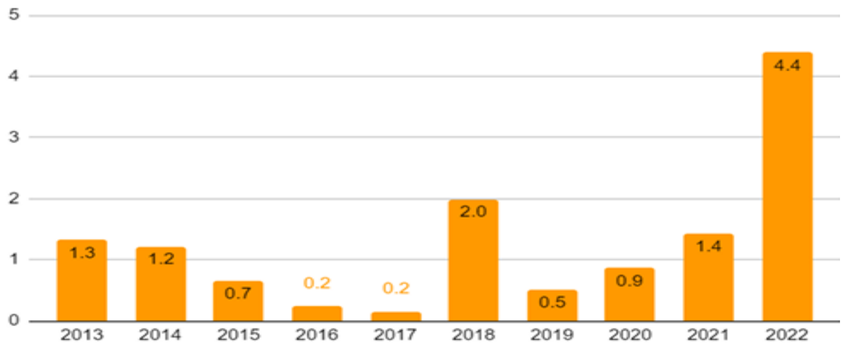
S/No	Imports from oil producing countries	Imports from non-oil producing countries
1	United States of America	Niger Republic
2	United Kingdom	Cote d'Ivoire
3	Venezuela	Belgium
4	Canada	India
5	Brazil	Korea
6	Netherlands	Finland
7	Persian Gulf Countries	Singapore
8		France
9		Israel
10		Portugal
11		Italy
12		Sweden
13		Tunisia and many more

Source: Researchers' compilation from various sources

The above tables show Nigeria's heavy reliance on foreign countries and refineries for her domestic petrol consumption. The sad commentary is that Nigeria buys petrol from non-crude oil producing countries that have functional refineries. In 2020, the Ministry of Petroleum Resources recently represented Nigerian Government in the signing of a memorandum of understanding with the government of Niger Republic for the purpose of importation of petroleum products. The Soraz refinery located in Zinder, Niger Republic has installed daily refining capacity of 20,000 barrels. The domestic requirement/consumption is 5,000 barrels per day, and this leaves a surplus of 15,000 barrels per day, which will be exported to Nigeria (Awojulugbe, 2020). The outsourcing of importation of petroleum products truncates the development of indigenous skill and technology in the downstream sector of oil industry in addition to exporting jobs to other countries.

And due to the vagaries of international petroleum products transactions, including exchange rate instabilities, the cost of importation of refined petroleum products has continued to soar. In response the government has introduced a regime of subsidies to cushion the effect on the consumers. Fuel subsidies became institutionalized in 1977, following the promulgation of the Price Control Act, which made it illegal for some products including petrol to be sold above the regulated price. The law was introduced by the military regime of Olusegun Obasanjo to cushion the effects of the global "Great Inflation" era of the 1970s, caused by a worldwide increase in energy prices (PWC, 2023). The subsidy has however been subjected to the worst forms of abuses running into billions of dollars over the past decades. Between 2006 and 2018, Nigeria spent about N10 trillion (US$24.5 billion) on petroleum subsidies. In 2019 and 2020 about N3 trillion ($7 billion) was spent on subsidies. Cumulatively, "the Nigerian government has spent over USD 30 billion on fuel subsidies over the past 18 years", and "this has had a significant impact on funds available for critical infrastructure and other essential sectors such as education, health, and defence" (PWC, 2023, p.2). Figure 1 highlights Nigeria's spending on fuel subsidy in trillions of naira for a ten-year period, from 2013 to 2022.

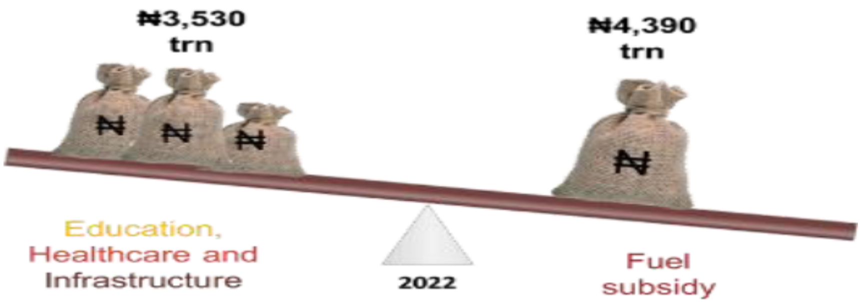
Fig. 1: Nigeria's fuel subsidy payment (N'trillion), 2013-2022



Source: PWC (2023, p.2)

Significantly, figure 2 underscores the real cost of subsidy payments on the critical infrastructure in the country. It shows that whereas subsidy payment gulped the sum of N4,390trillion in 2022, government's total spending in the same year on the three critical sectors: education; healthcare; and infrastructure amounted to only N3,530trillion.

Fig.2: Total fuel subsidy vs government allocation to critical sectors 2022



Source: PWC (2023, p.2)

Meanwhile, a few politically connected people benefit from subsidies by inflating figures for oil imports and over-invoicing the government for the cost of import. And such players have used their political connections and influence to scuttle attempts to remove the subsidies. This has led to strident calls that the subsidy should be removed so that the country could make progress (Ekpenyong, 2022).

This call for subsidy removal has however been opposed by the same forces that oppose the formalization of the informal or artisanal refineries. To appreciate the power and influence wielded by this network it will be argued here that the Nigerian state which emerged at independence has since been hijacked by hegemonic local bourgeoisie class and their cronies, who directly or indirectly control the country's economic and political system (Hertz, 2001). With the incorporation of Nigeria into the global capitalist order, which was enabled by colonialism, the state was not constructed for the benefit of the people (Onimode, 1983). At the negotiated independence, power was handed to the conservative oligarchs who would be loyal, foster patrons-clients relationship and maintain economic interests especially in the petroleum industry. The Nigerian State which emerged at independence has since continued to play an overarching role in the management and distribution of national resources: it has continued to distribute these resources as prebends to private domestic and international interests to whom it is irrevocably beholden (Joseph, 1991; Azom & Udeoji, 2022).

Petroleum resources have heightened the centrality of the state as the locus of the struggle for resources for personal advancement, social networks and group security, and this explicates the ubiquity of the State in the regulation of the oil industry and the allocation of licenses. As the hegemonic class is in control of the State, and the state is relatively autonomous from the social classes, it is at the same time immersed in struggle and competition (Ekekwe, 1986). With the dominant class in firm control of the state apparatuses including the legislative organ of the government, the National Assembly, it becomes a herculean task to amend or repeal the Petroleum Refining Regulation Act of 1974.

The conservative oligarchs and their cronies who have appropriated the oil industry through the importation of petroleum products under an obnoxious subsidy regime will not compromise their business interests. They resist the repeal of the existing Act and empowering the informal crude oil refiners through legislation. Illuminating the opposition to formalization of the informal crude oil refineries, a representative of the conservative oligarchs, and the Managing Director of Nigerian National Petroleum Company, Mele Kyari, said that "artisanal refineries are mere cooking pots and cannot be licensed and legalized" (*Vanguard*, August 24th, 2022).

Though derogatorily tagged “cooking pots”, the reality is that the products from the informal refineries augment the deficit of the refined products imports by government. These “cooking pots” are happening because the authorities, saddled with the duty to monitor and protect the oil pipelines, have been compromised by the oil theft cartel and owners of the informal refineries. In other words, there is collaboration and connivance between the security forces who often are cronies of the conservative oligarchs (cabal) in the oil industry. As has rightly been argued:

> a sophisticated mafia of powerful Nigerians and foreigners, including top military personnel, government officials, highly placed and retired oil industry personnel, politicians and business persons are the big-time oil thieves and financiers of oil bunkering syndicates, which over the years have sucked out the country’s economy (Amaize, 2022, para.1).

These bunkering cartels working with oil workers steal crude oil directly from major crude oil pipelines while officials pump crude to the different government oil terminals. They are then provided with security on the instruction of top officers to escort their vessels laden with stolen crude till the vessel sail safely out of the country’s territorial waters (Amaize, 2022). On 3 August 2023, for instance, a private security outfit – Tantita Security Services Limited – contracted in 2022 by the Nigerian National Petroleum Corporation to support the fight against crude oil theft, intercepted an MT PRAISEL vessel carrying 8100 barrels of illegal crude oil, which was being escorted by a Nigerian naval boat led by a senior naval commander (Addeh, 2023). Not even the spirited denial of its involvement in the deal could exonerate the Nigerian Navy from complicity in such acts (Ugwueze et al., 2024). Such large-scale oil theft has led to the loss of billions of dollars in oil revenue by the Nigerian government.

Theoretical framework

To further probe the failure of the Nigerian state to act in the public interest in the face of continued importation of refined petroleum products for domestic consumption, the obvious abuses associated with the fuel subsidy regime, as well as the state’s continued refusal to formalize the informal refineries even in the face of non-functionality of government-owned refineries, this paper anchors analysis on the basic propositions of the theory of regulatory capture which emphasises the role of interest groups in the formulation of public policy.

Early versions of capture theory were advanced in the 1950s and 60s by political scientists, whose studies of the lifecycle of regulatory agencies disputed the classic "public interest" theory of regulation and challenged its assumption of a benevolent regulator (Etzioni, 2009). These scholars observed a pattern that played out in regulatory agencies as they aged after an initial period of "youth" in which the regulations issued or promoted by a given agency work towards their public interest objectives, the agency enters into a phase of "maturity" marked both by increasing bureaucratization and growing distance from the group(s) initially responsible for setting the regulatory objectives. In this maturing phase, regulatory agencies were found to be drawn ever closer to the industry they were supposed to regulate and away from serving the public interest (Etzioni, 2009). Notable early proponents of the theory included Bernstein (1955), Black (1948), Buchanan and Tullock (1962); Laffont & Tirole (1991), and Levine & Forrence (1990).

The theory emphasises the role of interest groups in the formulation of public policy. One major way regulation is captured is when lobbyists representing industries or other special interests play a key role in drafting the legislation or the rules that implement it. In other words, regulatory capture occurs when a state regulatory agency created to act in the public interest instead advances the commercial or special interests that dominate the industry or sector it is charged with regulating. The basic assumption of this theory is that decisions do not just emerge; that in every decision, certain vested interests must be protected. Stigler (1971) considerably extended the explanatory capacity of the theory by arguing that the regulatory process can be captured by small business industries as well and not just by big businesses as had been previously presumed. Etzioni (2009, p.320) further expounded that "in many instances, capture occurs later, after the rule has already been authored…" and that "regulatory capture often takes place without altering the regulations on the books but by weakening their enforcement".

The theory enables explication of the subtle and subterranean decision making of self –interested individuals in government using agencies to achieve their objectives. It elucidates the framing and enforcement of government policies to benefit certain self-interested public policy makers, who make decisions as government officials or elected representatives. Our choice of this theory is premised on its capacity for broadening our understanding of the power of vested interests (cabals) in government and the informal social networks that influence government decisions with regard to non-formalisation of informal (artisanal) refineries in Nigeria's Niger Delta. The vested interests in the oil industry oppose oil reform in the form of formalisation of the artisanal refineries and revitalisation of the existing four government-owned refineries, so that their interest in the importation of petroleum products from foreign refineries under opaque subsidy regimes will not be tampered with.

In line with the position of Etzioni (2009), even though the Nigerian government has enacted some laudable legislations like the Local Content Act (2010) and the Petroleum Industry Act (2021) respectively aimed at domesticating the upstream and downstream operations of the oil industry, the implementation of such legislations is often diluted by the capture effect such that the will of the special interests continue to prevail. Part of the manifestations of this capture effect is the continued proliferation of informal artisanal refineries in the face of government's refusal to formalise the practice even while continuing to depend on importation of refined products to meet domestic needs. Ngwu and Nwokedi (2016) had cogently argued that the capture effect is responsible for the marketing of Nigeria's crude on Freight on Board (FOB) basis and the consequent relegation of the more profitable Cost, Freight and Insurance (CFI) mode of crude oil marketing used by most other oil exporting countries. In the next section, we elucidate the complex web of interests that undergird crude oil theft and informal artisanal refining in Nigeria's Niger Delta and then we make a case for the formalisation of the refineries.

Discussion

The imperatives of formalisation of informal oil refineries

The sophisticated nature of oil bunkering operation is a threat to investments, the health of the industry, the environment and the wealth of the nation. Nigeria battles oil theft and artisanal oil refinery operation and loses about 400,000 barrels of crude oil per day, thereby not meeting the OPEC allocated quota of 1.830 million barrels a day (Vanguard, August 24, 2022). The artisanal oil refineries are adjudged unprofessional, operating below international standards and threatening to secure livelihoods and to the environment. But good government initiatives, matched with commitment and operational adjustment, can promote a positive outcome if the refineries now illegal are formalized, licensed and monitored by government institutions (Mamudu et al, 2020). Ignoring the neglect, deprivation, and denial of benefits of oil production to the host communities is a root cause of oil bunkering and artisanal refineries and treating them dismissively by addressing them in derogatory words like "cooking pots" will lead to metastasis of disproportionate environmental deterioration and economic haemorrhage.

The irony of non-formalisation of informal oil refineries is that as government spends energy and resources to halt their operations, the more they spread and multiply. As using kinetic approach did not stop militancy in Niger Delta, its application will not stop their operations. Moreover, the use of force is in sharp contrast to non-kinetic approach adopted in artisanal gold mining in Zamfara and Kebbi States in Northwest Nigeria under Presidential Gold Mining Development Initiative (PAGMI), whereby the operations of the artisanal gold miners were formalized by the federal government. The PAGMI created an opportunity for formalization and mainstreaming of artisanal gold miners in synergy with Solid Minerals Development Fund, which amounts to double standard. This raises the question of the moral justification of providing the necessary support for the artisanal gold miners to deliver tremendous fiscal, economic benefits to the nation, giving them the economic opportunity to live, while attempting to deny similar reforms to the artisanal oil refiners.

The crude-for-fuel contracts are often not transparent and have been at the centre of corruption allegations, loss of revenue and under-development of human resources in the downstream sector of the oil industry. Nigeria has failed to benefit from high global oil prices largely as a result of the non-formalization of artisanal refineries, non-functional conventional refineries and opaque subsidy regime. The Nigerian Economic Summit Group (NESG) reported that in 2023 being the last year of the Buhari administration, the government proposed to spend N3.36 trillion on fuel subsidy from January to June 2023 when the subsidy regime was expected to be terminated. Meanwhile, the total expected revenue from crude oil for the entire years was a mere N2.23 trillion (NESG, 2024). In 2024, the projected expenditure on petrol subsidy was 5.4 trillion naira (Geiger, 2024) irrespective of the claim by the Bola Tinubu administration that fuel subsidy had been scrapped. To address the budgetary deficits arising from dwindling oil revenue and the continued subsidization of imported petroleum products, the Tinubu administration planned to borrow an extra 6.6 trillion naira in the 2024 budget cycle (Geiger, 2024).

The above indicates that while crude oil revenue is in arithmetic progression, the subsidy spending is in geometric progression, with financial and budgetary deficit to the economy. Meanwhile the Bretton Woods institutions, International Monetary Fund and the World Bank, had admonished the Federal Government to retrace steps on subsidizing petrol arguing that subsidy policy is not targeted at those in need but the rich.

Subsidy notwithstanding, in refining the crude in foreign refineries, the government pays both export and import duties, in contrast to engaging the artisans, requiring no port charges. The cost of hiring vessels will sometimes be more than the cost of the product on the vessel, and whether the crude oil is sold or not, the days the vessels are hired will bring costs (*Vanguard*, March 22, 2022). Engaging Nigerians in the field as artisanal refiners will promote the earning of honest livings. Informal refineries represent an opportunity that could be harnessed by government to generate jobs and social opportunities in an environment of high unemployment and poverty.

Making a case for the informal oil refineries, the former Senior Special Adviser to President Buhari on Niger Delta Affairs, Senator Ita Enang, argued that some of the artisanal refiners should produce chains of petroleum products and supply them for consumption in the country. Formalizing and licensing the artisanal refiners, he said, would save foreign exchange, boost revenue, reduce the nation's reliance on imported products, make redundant the oil subsidy, prevent the vandalizing of pipelines, and encourage private investors since the start-up capital is low compared to conventional refineries (Enang 2022). He further suggested that informal refineries in clusters could be profitable if sited close to a crude oil production facility from which they would buy and receive their feedstock. They would concentrate on a particular product, with an off taker lifting the product from the site. The relatively small investment cost would make it easier for private investors to form co-operatives, access funds and enter the refining business compared to the full-scale refineries. The legalized and licensed informal refineries would assist the government by generating employment for the unemployed youths, and the nation generally by reducing the high incidence of environmental pollution and degradation.

Similarly, the former Group Managing Director of the Nigerian National Petroleum Corporation (NNPC), Maikanti Baru, during his tenure in 2017 indicated that government planned to set up modular refineries in the Niger Delta region, which would incorporate militant youths and the operators of illegal refineries into the formal economy. Baru explained that the government planned to organise the youths into consortia, each consortium refining 1000 barrels of crude daily. Such an arrangement, he argued, would not only provide employment but would, more strategically, lead to a reduction in crime including rampant crude oil theft, and also reduce environmental and ecological damage and degradation caused by the activities of oil thieves (BusinessDay, 2017). Baru however cautioned that formalising the informal refineries would be a delicate process which must be carefully planned and meticulously executed in order for it to achieve the intended goals.

A 2017 BusinessDay editorial similarly advocated for the formalisation of artisanal refining, arguing that the projected growth in Nigeria's petroleum product consumption cannot be met even if all the four state-owned refineries with their combined 445,000 bbl/day refining capacity were to go into full operation. The paper also projected that not even the completion and activation of the 650,000 bbl/day capacity Dangote refinery, which was then under construction, would meet domestic product needs. The paper, therefore, made a cogent case for bridging the gap by formalizing artisanal refiners, especially in the creeks and remote locations in the Niger Delta, where difficult terrain and poor infrastructure make it nearly impossible to run the normal petroleum product supply chain (BusinessDay, 2017).

The Nigerian government has however been most reluctant to heed this call due to the intricate web of interests between the ruling elite and the special interests that have continued to hold the oil industry captive. Table 3 highlights the patronage network between the oil importers and Nigeria's ruling elite.

Table 3: Oil importers & patronage linkages with the Nigerian ruling class

S/No	Fuel Company Importers	Patronage Connections to the Ruling Class
1	Forte Oil Plc.	Forte Oil is owned by Olufemi Otedola, the scion of former Lagos State governor, Chief Michael Otedola. Chairman of Geregu Power plant, a major financier of People's Democratic Party and a close ally of former Presidents Chief Olusegun Obasanjo and Goodluck Jonathan.
2	Consolidated Oil (Conoil)	Mike Adenuga owns Consolidated Oil, but he is widely believed to be a front for General

		Babangida. Conoil's Headquarters is in Minna but head office is in Lagos.
3	Oando Oil Plc.	Oando Oil is owned by Adewale Tinubu, a nephew and relation of Sen. Bola Ahmed Tinubu, former Governor of Lagos State, and the Presidential candidate of All Progressive Congress.
4	Prudent Energy & Services Limited.	Alhaji Abdul Wasiu is the Chairman of Prudent Energy Ltd, one of the leading downstream oil and gas companies in Nigeria. He is a silent financier of All Progressive Congress. NNPC granted his company Prudent Energy license to lift 950,000 barrels of crude oil daily, in a two-year contract between 2018 and 2020. He is a major beneficiary of fuel for crude contract.
5	Cavendish Petroleum	Cavendish petroleum is owned by Alhaji Mai Daribe, the Borno Patriarch.
6	MRS Oil Plc	MRS Oil Plc, formerly Texaco is a fully integrated oil marketer. A leading downstream player with various positions in Nigeria oil industry. The Group Chief Operating Officer is Ms Amina Maina who is widely believed to be connected to the Presidency.
7	South Atlantic Petroleum Limited (SAPETRO)	SAPETRO was created in 1995 by General T. Y. Danjuma. T. Y. Danjuma is also the Chairman of ENI Nigeria Limited.
8	International Petroleum Development Company (AMNI)	Alhaji (Colonel) Sani Bello, a Fulani from Kontagora, Niger State, is the Chairman of AMNI. Alhaji Bello's son – Abu is marred to General Abdusalami Abubakar's eldest daughter.
9	Obat Oil and Gas Limited	Oba Obateru Akinrutan established Obat Oil Limited in 1981. A first-class influential traditional ruler of Ugbo Kingdom in Ondo State. Obat Oil is a major oil marketing

		company, with a tank farm that holds about 65million litres of petrol.
10	Rain Oil and Gas Limited	Rain Oil and Gas Limited is an integrated company established in 1997 by Chief Gabriel Ogbechie A prominent player in Nigerian downstream sector of oil and gas, and majority stakeholder in Eterna Oil. Its tank farm holds 50million litres of petrol.
11	Focus Energy	Focus Energy is a partnership with BG Group, a British Oil concern. Sen. Andy Uba, who was a former Special Assistant to President Obasanjo has major stakes in Focus Energy.
12	Cleanwater Consortium	Cleanwater Consortium, consisting Cleanwater Refinery and RivGas Petroleum and Gas Company, is believed to be owned by Peter Odili. Odili's brother in law. Okey Ezenwa, is the Vice Chairman of Cleanwater Consortium.
13	Starcrest Energy Nigeria Limited	Starcrest Energy Nigeria Limited is owned by Sir Emeka Offor, a very close political ally of Obasanjo and Goodluck Jonathan.
14	Capital Oil and Gas Limited	Capital Oil and Gas Limited was founded in 2001 by Senator Ifeanyi Ubah. Ubah is an entrepreneur, a businessman and the Chief Executive Officer of Capital Oil. The tank farm facility holds about 20% of NNPC fuel importation.

Source: Researchers' compilation from various sources.

The above table clearly illustrates the unwholesome connections between petroleum product importers and Nigeria's ruling elite whose responsibility it is to regulate the operations of Nigeria's oil industry, including ensuring the functionality of the four state-owned refineries. We thus argue that the elite have been unable to discharge their regulatory responsibilities due in large part to this capture effect. We further contend that the capture effect has also carried over into the quest for the formalisation of informal refineries in the Nigeria Delta which the ruling elite have continued to resist even while admitting that doing so would benefit the Nigerian economy in no small measure. A clear case of such admission by the ruling elite was the earlier cited position of Maikanti Baru, then GMD of NNPC, that by formalising their operations through the establishment of modular refineries in the Niger Delta, the government will not only be alleviating rampant unemployment in the region but will also, in a more strategic sense, curb crude oil theft and other forms of crime, and by extension boost the economy. Of course, that plan did not materialize due to the interplay of forces already described and so the government has continued to prioritise largely ineffectual kinetic measures to combat informal oil refining. This clearly underscores the capture effect in Nigeria's downstream oil industry. Nor is it limited to the downstream sector as the submission by Ngwu and Nwokedi (2016) above has shown.

Conclusion

We examined the bewildering contradiction between the refusal of successive Nigerian governments to formalise and legalise artisanal oil refining in the Niger Delta and the perennial dependence of the country on imports of petroleum products to meet domestic demand resulting from the persistent non-functionality of the four state-owned refineries. We contrasted these with the government's repeated refusal to promote local content in the nation's oil industry, and concluded that the refusal of the government to formalise the operations of the artisanal refineries inundating the creeks of the Niger Delta and the non-functionality of the state-owned refineries are both the cumulative effects of the capture of Nigeria's oil industry by special interests who have effectively undermined the regulation and operations of the industry. Such interests consist of a complex web of actors that includes, but is not limited to, high-profile public functionaries in league with powerful businesses and transnational entities with holdings in offshore oil refining operations.

We argue for the formalisation of the activities of the artisanal refineries within the context of fundamental reforms in Nigeria's downstream sector. But since we are under no illusion that such reforms will come easily because of the coincidence of interest between the agents of the state and special interests engaged in the illegal oil bunkering that supplies the artisanal refineries with their stocks, we believe that the solution to the problem of informal oil refining and associated oil-related crimes in Nigeria is to be sought in a radical transformation in the character of the Nigerian state. It has become mindlessly predatory and has abdicated its primary responsibility of ensuring the welfare of its citizens. We add that such transformation can only be contemplated through the agency of the country's intellectuals working as catalysts for societal awakening.

References

Addeh, E. Day (August 4, 2023). N550.8m Illegal Crude Consignment Escorted By Navy Intercepted in N'Delta. https:// www. thisdaylive. com/ index. php/ 2023/ 08/ 04/ n550- 8m- illegal al- crude-consignment-escorted-by-navy-intercepted-in-ndelta

Amaize, E. (August 27, 2022). Oil Theft: How security operatives, govt officials run bunkering cartel. https://www.vanguardngr.com/2022/08/oil-theft-how-security-operatives-govt-officials-run-bunkering-cartel/

Awojulugbe, O. 2020. Nigeria signs memorandum of understanding to import fuel from Niger Republic. https://www.thecable.ng/nigeria-signs-mou-to-import-fuel-from-niger-republic/amp. Accessed 20 August, 2022.

Azom, S. N. and Udeoji, E. 2022. The non-formalization of party decision-making in Nigeria's fourth republic. Inc, Okechukwu Ibeanu, *et al (eds.), Anonymous power: Parties, Interest Groups and Politics of Decision-making in Nigeria's Fourth Republic*, pp. 41-56, Singapore: Palgrave Macmillan.

Bernstein, M. H. 1955. *Regulating Business by Independent Commission*. Princeton: Princeton University Press.

Black, D. 1948. On the Rationale of Group Decision-making. *Journal of Political Economy*, 56(1), 23–34. http://www.jstor.org/stable/1825026

Buchanan, J. M. & Tullock, G. 1962. *The Calculus of Consent: Logical Foundations for Constitutional Democracy*. University of Michigan Press.

BusinessDay (May 10, 2017). Editorial: Formalising illegal refineries. https://businessday.ng/editorial/article/formalising-illegal-refineries/

Chikwem, F.C. 2014. *Political economy of fuel importation and development of refineries in Nigeria, 1999-2013.* An unpublished Ph.D. proposal Thesis submitted to the Department of Political Science, University of Nigeria, Nsukka.

Ekekwe, E. 1986. *Class and state*. London, Longman Group Limited.

Ekpenyong, C. January 22, 2022. This wickedness called subsidy must stop. https://www.vanguardngr.com/2022/01/this-wickedness-called-subsidy-must-stop/. Accessed 24 July, 2022.

Enang, I. 2022. *Artisanal refining: Matters Arising.* NTA, Good Morning Nigeria, 15 August.

Etzioni, A. 2009. The Capture Theory of Regulations—Revisited. *Society*. 46. 319-323. 10.1007/s12115-009-9228-3.

FGN, 2013. *Report of the Nigerian National Refineries Special Task Force*. .https://www.dprnigeria.com/. Accessed 17 July, 2022.

Geiger, J. (Jun 06, 2024). Nigeria to Spend Nearly $4 Billion on Fuel Subsidies This Year. https://oilprice.com/Latest-Energy-News/World-News/Nigeria-to-Spend-Nearly-4-Billion-on-Fuel-Subsidies-This-Year.html

Hertz, N. (2001). *The silent takeover: Global capitalism and the death of democracy*. Arrow Books.

Herztz, N. 2001. *The silent takeover: Global capitalism and the death of democracy*. Arrow Books.

John, E.O. and Nnadozie, J. (2021). Artisanal Crude Refining in Niger Delta and its Impact on the Cultural and Religious Beliefs of the People. *GNOSI: An Interdisciplinary Journal of Human Theory and Praxis*, 4(1), 112–124.

Joseph, R. 1991. *Democracy and prebendal politics in Nigeria.* Cambridge University Press.

Kyari, M. 2022. Artisanal refineries cannot be legalized. *Vanguard*, 24 August, 2022.

Laffont, J. J., & Tirole, J. 1991. The Politics of Government Decision-Making: A Theory of Regulatory Capture. *The Quarterly Journal of Economics*, 106(4), 1089-1127.

Levine, M. E., & Forrence, J. L. 1990. Regulatory Capture, Public Interest, and the Public Agenda: Toward a Synthesis. *Journal of Law, Economics, and Organization*, 6, 167-198

Mamudu, A, Okoro, E, Igwilo K, Olabode, O, Elehinafe, F. & Odulami, O. 2019. Challenges and prospects of converting Nigeria illegal refineries to modular refineries. https://openchemicalengineeringjournal.com/VOLUME/13/PAGE/1/FULL TEXT/ Accessed on 7 July, 2022.

NESG (Jun 6, 2023). Cost and Benefits of Fuel Subsidy in Nigeria. https://nesgroup.org/blog/Cost-and-Benefits-of-Fuel-Subsidy-in-Nigeria

Ngwu, E.C. and Nwokedi, M.E. (2016). Political Economy of Crude Oil Marketing and Nigeria's Maritime Industry. *University of Nigeria Journal of Political Economy*, 9(2).

NNPC 2018. Petroleum volumes imported from foreign refineries by NNPC/Independent marketers: PPRA Monthly Review of Operations. Accessed 6 May, 2022: http://abcpages.de/www/downstreamnigerian+petroleum+sector

Obenade, M. and Amangabara, G. 2012. The socio-economic implication of oil theft and artisanal refining in the Niger Delta Region of Nigeria. *International J of Science and Research.* https://www.researchgate.net/publication/264534633. Accessed 4 June, 2022

Obenade, M. and Amangabara, GT. 2014. Perspective: the environmental implications of oil theft and artisanal refining in the Niger Delta region. *Asian R. Environmental and Earth Sciences* 1(2): 25–29.

Odeh, A.M. (2011). Deregulation policy in the downstream oil sector and the Nigerian economy. *J. Social Science & Public Policy*, 3, 87-100.

Ogele, E.P. and Egobueze, A. 2020. The artisanal refining and socio-economic development in Rivers State, Nigeria, 2007-2017. *International Journal of Research and Innovation in Social Science (IJRISS).* IV(IV) ISSN 2454-6186.

Ojekunle, A. 2022. Nigeria's petrol subsidy in six months surpassed NNPC oil revenue. https://www.thecable.ng/exclusive-nigerias-petrol-subsidy-in-6-months-surpassed-nnpcs-oil-revenue. Accessed 10 September, 2022.

Olawoyin, O. (27 March 2022). Nigeria: Fuel Subsidy 'A Criminal Enterprise' - Nigerian Minister. https://allafrica.com/stories/202203280035.html

Onimode, B. 1983. *Imperialism and underdevelopment in Nigeria.* London, Longman Group Limited.

Onuh, P. A., Omenma, T. J., Onyishi, C. J., Udeogu, C. U., Nkalu, N. C., & Iwuoha, V. O. 2021. Artisanal refining of crude oil in the Niger Delta: A challenge to clean-up and remediation in Ogoniland. *Local Economy*, 36(6), 468–486. https://doi.org/10.1177/02690942211071075

Onyeiwu, S. (March 19, 2024). Nigeria's fuel subsidy removal was too sudden: why a gradual approach would have been better. https://theconversation.com/nigerias-fuel-subsidy-removal-was-too-sudden-why-a-gradual-approach-would-have-been-better-222224

Onyena AP and Sam K. 2020. A review of the threat of oil exploitation to mangrove ecosystem: insights from Niger Delta, Nigeria. *Global Ecology and Conservation* 22: 1–12.

Ovaga, O.H. 2010. Deregulation of downstream oil sector in Nigeria: Its prospect. *Journal of Social Science and Public Policy,* 2, 115-129.

PWC (May, 2023). Fuel subsidy in Nigeria - issues, challenges and the way forward. https://www.pwc.com/ng/en/assets/pdf/fuel-subsidy-in-nigeria-issues-challenges-and-the-way-forward.pdf

Salau, S. 2011. OPEC ranks Nigeria second biggest oil exporter. *The Guardian,* 26 July.

Stakeholder Democracy Network (SDN) (2022). Dirty fuel imports continue to pose a health risk. https://www.stakeholder democracy.org/dirty-fuel/. Accessed 10 July, 2022.

Stakeholder Democracy Network (SDN). 2013. Communities Not Criminals: Illegal oil refining in the Niger Delta. Port-Harcourt, Nigeria. https://www.stakeholderdemocracy.org/sdn-report-communities-not-criminals-illegal-oil-refining-in-the-niger-delta/. Accessed 10 July, 2022.

Stigler, G. J. 1971. The Theory of Economic Regulation. *The Bell Journal of Economics and Management Science*, 2, 3-21.

The Vanguard. 2022. Editorial: Oil theft: How security operatives, government officials run bunkering cartel, 27 August. https://www.vanguardngr.com/2022/08/oil-theft-how-security-operatives-govt-officials-run-bunkering-cartel/ Accessed 15 September, 2022

The Vanguard. 2022. Stakeholders call for upscale in artisanal refineries in Niger Delta, March 22. https://www.vanguardngr.com/2022/03/stakeholders- call-for-upscale-in-artisanal-refineries-activities-in-niger-delta/ Accessed 10 July, 2022.

Ugwueze, M. I., Asua, S. A., Mbadah, S. A., Ezeme, P. E. Atime, P. L. and Ngwu, E. C. (2024). The State and Criminalization of Artisanal Oil Refining in Nigeria. *Society*. https://doi.org/10.1007/s12115-024-00990-w.