FROM SURVIVAL STRATEGY TO STRUCTURAL DEPENDENCE: THE POLITICAL ECONOMY OF ILLEGAL OIL REFINING IN BAYELSA STATE

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Abstract
The study investigated how involvement in illicit crude oil refining creates new forms of economic dependency among residents of Bayelsa State, identifying mechanisms such as income dependence, informal labour networks, patron-client relationships, and a lack of alternative livelihoods that support these dependency relationships. Using a qualitative study design, information was gathered from four communities, Bassambiri/Opu Nembe, Akassa/Elepa/Abonuma, Bilabiri, and Biseni, through Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs). To ensure meaningful engagement with traditional practitioners, community leaders, and active refiners participating in the local refining economy, purposive and snowball selection strategies were used to choose participants for a total of 22 KIIs and four FGDs. To analyze the data for this study, the thematic method was employed. The thematic analysis of the results shows that involvement in illicit refining results in complex and long-lasting forms of economic dependency that affect households and larger community systems in addition to individual players. The study also demonstrates that kpo-fire serves as an alternative livelihood system that bridges the gaps left by unemployment, a weak governmental presence, and the decline of traditional professions like farming and fishing as a result of environmental deterioration. Many locals consequently become economically dependent on the refining networks for access to informal loans, social protection, and everyday survival. The study concludes that deep-rooted socioeconomic interdependence, ingrained in regional survival tactics, in addition to criminal intent, maintains illegal refining in Bayelsa State. The report suggests, among other things, that community-level dependency structures be addressed by targeted social protection measures that lessen reliance on informal refining economies, livelihood diversification programs, environmental restoration projects, and inclusive economic governance.

Keywords: Illegal, oil bunkering, refining, structural dependency, Bayelsa State.

1.0 Introduction

Illegal crude oil refining in the Niger Delta region has emerged as one of Nigeria's most complex socioeconomic and environmental challenges, representing a critical nexus between resource extraction, environmental degradation, and livelihood disruption that demands urgent scholarly attention. The scale of this phenomenon is staggering, with an estimated 150,000 barrels of crude oil stolen daily across Nigeria, of which approximately 25% remains in the Niger Delta for local refining and consumption, supporting an estimated 500 refining camps across the region (SDN, 2015). The economic magnitude of these operations has expanded dramatically, with total supply chain earnings increasing twenty-four-fold from an estimated £24 million in 2012 to £578.5 million in 2017, while the number of refineries is estimated to have increased five-fold during the same period (SDN, 2019). In 2022 alone, Nigeria lost approximately $23 billion in oil revenue to theft, representing one of the highest losses in recent years, with oil companies losing between 300,000 and 400,000 barrels daily (Al Jazeera, 2024).

Bayelsa State bears a disproportionate burden of this crisis, hosting 55.35% (817) of the total 1,476 artisanal refining sites discovered in the Central Niger Delta, significantly higher than Rivers State's 39.16% (578) and Delta State's 5.49% (81) (Okpara *et al.*, 2024). The environmental consequences have been catastrophic, with an average of 240,000 barrels of crude oil spilt annually in the Niger Delta, leading to severe contamination of water sources, soil degradation, and loss of biodiversity that has fundamentally altered traditional livelihood systems (Ordinioha & Brisibe, 2013). In Bayelsa State specifically, the environmental degradation has reached alarming levels, with oil spills contaminating water sources and reducing agricultural productivity, while 78% of respondents in affected communities report that artisanal refining activities have reduced the number of persons involved in fishing and farming, and 78% indicate that major water supply sources are polluted by crude oil waste from local refineries (Reuben *et al*., 2024).

The health implications are equally severe, with research indicating that 68.4% of residents in affected areas experience health challenges as a result of exposure to residues from illegal petroleum refining, while 86% of respondents agree that kerosene derived from artisanal refineries sometimes causes domestic fire accidents due to substandard production techniques (Reuben *et al*., 2024). The transformation of traditional economic structures has been profound, with several sources of livelihood, including farming, fishing, trading, welding, carpentry, and civil service work, being abandoned as artisanal refining becomes increasingly lucrative, generating weekly incomes of up to 200,000 naira ($480) for individual operators (Ebiri, 2019). This economic shift has created what researchers describe as "occupational disruptions and emergence of an organized criminal economy characterized by violence," where almost 90% of Bayelsa State's population experiences extreme poverty, making illegal refining an attractive alternative to traditional occupations (Vanguard Nigeria, 2022).

Despite the extensive documentation of illegal oil refining's environmental and economic impacts, significant gaps remain in the existing literature regarding the comprehensive understanding of how these activities systematically distort traditional livelihood patterns and create new forms of economic dependency in oil-producing communities. Previous studies have primarily focused on either environmental degradation (Ordinioha & Brisibe, 2013; Okpara *et al*., 2024) or economic aspects (SDN, 2015, 2019) in isolation, without adequately examining the complex interconnections between illegal refining activities and the fundamental transformation of community livelihood systems. The literature has also been limited in its analysis of how illegal refining creates alternative economic structures that, while providing immediate income opportunities, systematically undermine long-term community resilience and sustainable development prospects (Reuben *et al*., 2024). Furthermore, existing research has not sufficiently explored the mechanisms through which illegal refining activities create new forms of social stratification and economic inequality within communities, nor has it adequately examined how these activities reshape traditional social structures and authority systems.

This study on illegal oil refining and livelihood distortions in Bayelsa State, Nigeria, hopes to address these critical gaps by providing a detailed analysis of how illegal refining activities transform traditional livelihood patterns and create new forms of economic dependency within oil-producing communities in Bayelsa State, Nigeria.

Objectives of the Study

i. To investigate how participation in illegal refining creates new forms of economic dependency among community members in Bayelsa State.
ii. To identify the mechanisms through which illegal refining operations generate and sustain economic dependency relationships within affected communities.

Illegal Crude Oil Refining and Economic Dependence in the Niger Delta

Illegal crude oil refining and the resulting dynamics of economic dependence in the Niger Delta provide a unique window into the contradictory logic of resource-based economies at the margins of formal authority, development, and social well-being. In conceptualizing economic dependence within this context, scholarship consistently depicts a shifting, multi-scalar relationship in which entire communities, households, and even regional power structures become embedded in the informal oil economy, sometimes by necessity and sometimes by design. The rise and normalization of illegal refining in the Niger Delta must be understood as not merely an opportunistic pursuit of income, but as a rational and at times unavoidable response to prolonged exclusion, environmental decline, and policy failure. By examining the multidimensional character of economic dependence fostered by this illicit sector, this literature review draws out the multiple threads, structural, social, and psychological, that weave together the lived reality of the Niger Delta's oil-rich but development-poor environment.

The origins of economic dependence on illegal crude oil refining are deeply rooted in the Niger Delta's long history of marginalization and the chronic failure of both government and multinational oil companies to deliver meaningful and lasting development for host communities. The scenario, as chronicled by Ebiri (2019) and SDN (2015, 2019), is one where the sudden influx of oil multinationals and state agencies dramatically altered the local economy but failed to provide sustainable employment or alternative livelihoods as compensation for lands lost, rivers polluted, and a social contract undermined. The formal benefits of oil, such as royalties, taxes, employment, and infrastructure, were systematically siphoned off to the federal center and elite interests, leaving the vast majority of Niger Delta residents navigating poverty and declining living conditions even as regional indices of wealth and productivity soared. Within this context, the lure of informal refining was not so much a product of greed as it was a necessity imposed by the failure of legitimate avenues for economic participation and gain, as communities faced acute and chronic deprivation despite the presence of staggering national oil revenues.

At its core, economic dependence on illegal refining emerges as traditional livelihoods, principally fishing, farming, and artisanal trading, succumb to the relentless advance of oil-related environmental degradation. Industrial-scale oil spills, gas flaring, and chronic pollution rendered farmland infertile and water bodies barren; consequently, the subsistence economy of yesteryears, which provided both food security and a measure of communal autonomy, faded to the margins (Okpara *et al*., 2024; Reuben *et al*., 2024). The pivot toward oil theft and refining, though illegal and fraught with risk, was for many the only imaginable alternative, a newly forged economic identity rooted in the region's last remaining comparative advantage: its proximity to oil infrastructure, crude flows, and informal markets. For thousands, and ultimately entire communities, this pivot created a new way of life: one where daily existence was shaped around the rhythms of clandestine refining, distribution, and sales, and where the fate of households was increasingly tethered to the fortunes of the informal oil sector.

This new reality of dependence is not merely individual but collective in character. The literature describes how entire rural settlements in the Niger Delta, and even urban enclaves on the periphery, reoriented their economies around the illicit refining value chain. In some communities, a majority of able-bodied young men and, increasingly, women and girls found work within bustling networks spanning roles such as crude oil theft ("bunkering"), refinery operation, product transportation, distribution, and marketing (Reuben *et al*., 2024). In the process, social capital, kinship bonds, and communal authority, including traditional leaders and elders, became intertwined with the informal oil economy both as managers and beneficiaries, or at times as reluctant facilitators, collecting "taxes" or policing boundaries. The result was a communalization of risk and reward: families and entire communities were drawn into dependency on refining proceeds, sometimes as their principal or exclusive source of income. This collectively reinforced economic logic is more pernicious than mere opportunism, it cultivates an economy where withdrawal becomes near impossible without incurring widespread hardship or triggering new waves of poverty and insecurity.

Dependency on illegal refining is compounded by the sector's hierarchical and exclusionary structure, as documented by the Stakeholder Democracy Network (2019) and corroborated by Ebiri (2019). The illicit sector is not a flat or egalitarian space; rather, it reproduces, and at times sharpens, existing social stratifications. Camp owners and financiers, often with the means to secure capital, technical knowledge, and protection from complicit security or political actors, are able to reap disproportionate profits and exercise formidable control over entry, working conditions, and profit allocation. For most participants, especially youth and less-connected community members, labour is hazardous, remuneration is low, and prospects for mobility are slim. In other words, the informal oil economy becomes not just a basis for income, but an arena for new forms of economic dependence and patronage, mirroring at a smaller scale the broader oil dependency and exploitation characterizing state-society relations in Nigeria. This paradigm engenders a new class of local economic elites with interests bound to the persistence of illegal refining, further institutionalizing dependence within affected regions.

This landscape of economic reliance is perpetuated through the failure of formal alternatives and persistent underdevelopment. Years of state and non-governmental interventions, from the flawed implementation of the Niger Delta Development Commission (NDDC) to various “amnesty” and skills-training initiatives, often failed to generate sustainable livelihoods or meaningful economic inclusion. Indeed, conceptual and policy critiques repeatedly emphasize that interventions are hampered by patronage, bureaucratic incompetence, limited grassroots input, and outright corruption (Okpara *et al*., 2024). Consequently, for many communities, the informal oil sector offers the only predictable avenue for employment, household sustenance, and the capacity to meet basic social obligations, such as school fees, healthcare costs, and social ceremonies. Even women, traditionally less visible in the oil economy, have been drawn into support roles, distribution, and retail activities, further knitting the illicit sector into the fabric of community livelihoods (Reuben *et al*., 2024).

At the household level, economic dependence on illegal crude oil refining transforms not only consumption and spending patterns, but also aspirations, values, and social strategies. A key insight from the literature is the way in which refining earnings, even if volatile and precarious, are perceived as preferable to the shrinking and unreliable gains of traditional occupations. Ebiri (2019) and Reuben *et al*. (2024) report on the shifting aspirations of youth, who increasingly assess the value of their education, skills acquisition, or farming experience against the immediate, visible returns from artisanal refining. The “cost-benefit” calculus, though practical, also upends longer-term decision-making around schooling, marriage, and investment, as short-term gain becomes the guiding logic for families with few alternatives. This shift accelerates intergenerational fractures, weakens respect for elders who lack ties to the informal oil economy, and narrows the window for social mobility outside of criminalized enterprise.

Critical to the reinforcement and persistence of economic dependence are the social and moral justifications for illegal refining, which have evolved alongside participation in the trade. Most scholars agree that communities rationalize involvement on pragmatic, ethical, and protest-based grounds (SDN, 2019; Ebiri, 2019). First, the dire lack of employment prospects or functioning state welfare makes illegal refining less an act of willful criminality and more a “forced choice.” Second, recurring narratives of dispossession, whereby oil is seen as fundamentally belonging to locals and wrongfully captured by distant elites and multinationals, provide both symbolic meaning and social acceptance for refining. Third, the sector’s capacity to fund local needs not addressed by government or oil companies, such as contributions to schools, churches, or healthcare, confers community legitimacy. In some cases, the trade even funds local security or dispute resolution, filling the gaps left by absent or ineffective state institutions, thus deepening the integration of illegal refining into everyday life and governance.

One of the most insidious features of this new economic order is the way it erects formidable barriers to exit. As the literature notes, the longer a household or community is reliant on illegal refining, the more it is locked into its logic. Children are socialized into the trade, spouses and extended kin are drawn into ancillary roles, and alternative infrastructure (such as new skills, farm investments, or educational opportunities) atrophies through lack of use and investment. The collapse of food security, erosion of fishing and farming skills, and decline in alternative occupations mean that returning to previous livelihoods, even if new opportunities arise, is daunting. Under current conditions, any sustained crackdown on illegal refining risks mass impoverishment and social dislocation, a dilemma that complicates the calculus of both policy-makers and community leaders (Okpara *et al*., 2024). It is this cumulative effect, a largely involuntary "lock-in" to dependency, that constitutes the most pressing macroeconomic problem associated with informal oil economies in the Niger Delta.

Beyond the local, the expansion of illegal refining as an economic mainstay distorts broader regional and national economies in subtle but profound ways. As Ebiri (2019) observes, the siphoning of vast crude oil volumes into informal circuits not only deprives the Nigerian government of critical revenue but also perpetuates a wider "resource dependence" dynamic that discourages meaningful diversification or reinvestment into productive sectors. The molecular reproduction of dependency at the village level mirrors the well-documented dangers of the resource curse at the macro level, reinforcing a political culture that is both extractive and short-term in orientation. In this paradigm, even when new public investments are made, such as roads or markets, they too are captured by the informal oil economy, either physically (as transport routes for illegal products) or institutionally (as sources of rent-seeking and local politics).

The perversity of economic dependence is further heightened by the way illegal refining embeds itself in the moral economy and governance landscape of the Niger Delta. As discussed by SDN (2015, 2019) and reinforced by local ethnographic and development research, informal refining does not merely coexist with state authority, but often subverts and occasionally replaces it. Community leaders who align with dominant camps or brokers can leverage their influence to secure limited development, safety, or patronage for their supporters, sometimes negotiating agreements with state actors for selective enforcement or protection. These arrangements reinforce cycles of dependence, clientelism, and rent extraction, making reform exceedingly difficult. Such governance arrangements, while providing a measure of stability and predictability, also formalize the integration of illegality into legitimate circuits of economic and political power, a phenomenon that has long-term consequences for the culture of law, accountability, and social contract in the region.

Compounding the challenges, environmental damage, already a primary cause of the shift into illegal refining, feeds back into and exacerbates dependency by further undermining the viability of alternatives. The literature is clear that oil spills, soot, water contamination, and deforestation, most of which result from both formal and informal oil economies, continue to erode whatever remains of traditional livelihoods (Okpara *et al.*, 2024; Essang, 2026). Even if artisanal refining were suddenly halted, the ecological devastation and loss of local knowledge would leave a generation without the necessary resources or skills to return to a pre-oil or non-oil economy. This new dependency is therefore as much structural and environmental as it is economic and social, locking the region into an unstable equilibrium from which easy escape is impossible.

Finally, the psychological and aspirational dimensions of economic dependence, though less quantifiable, are repeatedly underscored in the literature. For youth, especially, the visibility of quick financial gains made by those in the refining trade recalibrates expectations about work, risk, and reward. Schooling and patient skills development appear irrational in comparison to the immediate, albeit risky, returns from oil-related work. Older generations, once the custodians of fishing and farming expertise, are left with diminished authority as their prized knowledge loses economic relevance. For women, the dual pull of short-term financial needs and heightened social participation in informal economic activity makes disengagement more, not less, difficult over time (Reuben *et al*., 2024).

It should be added that illegal crude oil refining and the resultant economic dependence in the Niger Delta are best understood not as aberrations in an otherwise functional system, but as intrinsic and rational adaptations to persistent exclusion, environmental devastation, and the recurrent failures of development policy. The sector's integration into daily life, local governance, and regional economies produces a pernicious and involuntary "dependency trap" that will be difficult to dismantle without far-reaching environmental restoration, policy reform, investment in sustainable livelihoods, and changes in the political economy of oil. Until then, the Niger Delta will remain a region where informal refining is not simply attractive, but necessary (a mainstay), and not an outlier, in the lived experience of its people.

Study methods

The study examined how participation in illegal refining creates new forms of economic dependency among community members in Bayelsa State. To achieve the study objectives, this study adopted a qualitative research design to capture the lived experiences and social dynamics underpinning illegal crude oil refining and economic dependency in selected communities of Bayelsa State, Nigeria. Given the qualitative orientation of the study, a sample size of 63 participants was used. The study adopted the purposive and snowballing sampling techniques to select participants for the study. While the purposive technique was not only employed to select the research location (Bayelsa State), but was also employed to target the first key informant for the research interview, the snowballing technique was employed to target subsequent key informants from referrals. While the Key Informant Interview (KIIs) and Focus Group Discussions (FGDs) represent the primary data collection methods for this study, the secondary data sources for this study were largely dependent on extensive document reviews, journal, text, and other existing print materials. Thematic analytical method was opted to analyze the data for this study. To this end, transcripts were reviewed repeatedly to identify emergent codes and patterns, which were organized into thematic clusters in line with the objectives of the study.

Results

Theme 1: How Illegal Refining Participants Create New Forms of Economic Dependence in Communities

This theme examines how participation in illegal crude oil refining (kpo-fire) extends beyond individual survival strategies to generate new and deeply entrenched forms of economic dependence within host communities. The analysis reveals that illegal refining has evolved into a localized political economy that reorganizes access to income, reshapes power relations, and redefines notions of work, support, and obligation. Rather than functioning as a marginal or temporary activity, kpo-fire increasingly operates as a central economic pillar upon which households, informal markets, and community-level survival strategies depend. This dependence is not accidental; it is actively produced and reproduced through monetary circulation, social patronage, and the strategic filling of welfare gaps left by the state.

At the community level, illegal refining participants often assume roles that transcend simple income earners. Refiners, camp owners, transporters, and security intermediaries become informal employers, lenders, and benefactors. Money generated from refining circulates through daily consumption, ceremonial obligations, school fees, medical bills, and emergency support. Over time, this circulation creates a form of structural reliance in which households not directly involved in refining nonetheless depend on its proceeds for survival. The thematic analysis shows that this dependence is normalized through everyday practices, making it difficult for communities to collectively resist or disengage from illegal refining even when its environmental and social costs are acknowledged. One community participant noted:

> Even people who say they don't like kpo-fire are surviving because of it. School fees are paid from that money, hospital bills are settled with it, and when there is burial or marriage, it is the refiners that contribute the most. If kpo-fire stops today, many families here will not eat, not because they like it, but because everything now depends on it (K. Dumoye, personal communication, FGD, July 2025).

This form of economic dependence is reinforced by the collapse of alternative livelihood infrastructures. As discussed in earlier themes, farming and fishing have been severely undermined, leaving few viable economic anchors. In this vacuum, illegal refining fills not only an income gap but an institutional one. Refining participants provide informal social protection in contexts where state welfare systems are absent or inaccessible. This includes ad hoc health support, assistance during floods or fires, and contributions during communal crises. The analysis indicates that such practices gradually reposition refiners as indispensable economic actors, blurring distinctions between illegality and legitimacy.

Importantly, this dependence is asymmetric. While communities rely on refining proceeds, control over capital accumulation remains concentrated among a relatively small group of actors—camp owners, financiers, and intermediaries. This concentration produces new hierarchies within communities, redefining power along economic lines rather than age, lineage, or traditional authority. Younger men with access to refining networks gain disproportionate influence, while elders and traditional leaders become economically sidelined. This reconfiguration weakens traditional governance structures and complicates collective decision-making around environmental protection or conflict resolution. According to one of the community respondents:

> Before, elders had authority because they controlled land and fishing areas. Now, authority follows money. A young man who owns a refining camp can challenge elders because people depend on him. Even chiefs cannot talk too much because they know the community survives on that money (L. Okoroma, personal communication, KII–Community Leader, August 2025).

Gendered dimensions of economic dependence also feature prominently under this theme. While men dominate refining operations, women's economic activities become increasingly tied to the refining economy. Women engage in food vending around camps, petty trading financed by refining income, and informal savings schemes dependent on men's earnings from kpo-fire. Although this creates short-term economic opportunities, it simultaneously deepens women's vulnerability by tethering their livelihoods to an illegal and unstable economic system over which they have little control. The analysis suggests that this dependence reinforces gendered power imbalances within households, as women's economic security becomes contingent on male participation in refining. Furthermore, the normalization of refining income reshapes community consumption patterns and expectations. Participants described rising costs of living, increased social spending, and a monetization of social relations. As refining money becomes embedded in daily life, households not benefiting directly from it experience relative deprivation, further intensifying pressure to join or support the illegal economy. This creates a self-reinforcing cycle in which economic dependence expands horizontally across the community. One of the Kpo-Fire participant noted:

> Everything has become money now. If you don't have someone in kpo-fire, life is hard. Prices have gone up, and people expect you to spend the way refiners spend. Even those who were managing small farming before are now pushed to depend on those doing illegal refining (M. Ebikeme, personal communication, FGD, August 2025).

Institutional stakeholders provided corroborating perspectives on how illegal refining entrenches community dependence. NSCDC officers noted that enforcement efforts are often undermined by community resistance rooted in economic reliance. Communities may withhold intelligence, obstruct operations, or frame enforcement as an attack on collective survival. This resistance is not necessarily ideological but pragmatic, reflecting fear of economic collapse if refining activities are disrupted without viable alternatives. In the words of one of the officers:

> When we go for operations, the community response is often hostile, not because they support crime, but because they depend on it. They know that if refining stops, there is no other economy to fall back on. That dependence makes our work very difficult (N. Ahmed, personal communication, KII–NSCDC, August 2025)

Similarly, interviews with Tantita staff highlighted how economic dependence complicates surveillance and security contracting. While communities may publicly endorse anti-oil theft initiatives, privately they remain economically invested in refining networks. This duality reflects the embeddedness of illegal refining within everyday survival systems. Tantita respondents emphasized that without parallel livelihood restoration, surveillance interventions risk deepening hardship and reinforcing dependence through displacement rather than resolution. One of the participants expressed the following views:

> We see communities caught in between. They want protection and development, but at the same time, their daily survival depends on illegal refining. Until there is a replacement economy, that dependence will remain, no matter how strong surveillance becomes" (O. Erepamor, personal communication, KII–Tantita, July 2025)

Another critical aspect of this theme is intergenerational economic dependence. Children and adolescents grow up in environments where refining income funds education, healthcare, and social mobility. This embeds kpo-fire into aspirations and future planning, even among those not directly involved. Over time, the refining economy becomes perceived as a legitimate pathway to success, reinforcing long-term dependence and undermining efforts at moral or behavioural change. Additionally, the analysis shows that economic dependence on illegal refining is sustained by uncertainty and precarity. The illegality of refining creates instability, yet this instability paradoxically strengthens dependence by discouraging long-term planning outside the refining economy. Communities remain locked into short-term survival logic, unable to invest in sustainable alternatives due to fear of sudden income loss.

> People know kpo-fire is dangerous and can stop anytime, but that fear is what makes them hold onto it more. There is no time to plan for tomorrow when today is not guaranteed. So, dependence continues, even when everyone knows it cannot last forever (P. Tare, personal communication, FGD, July 2025)

It is necessary to point out as a conclusion here that theme 3 has shown that illegal crude oil refining generates new forms of economic dependence that restructure community life in Bayelsa State. Through income circulation, informal welfare provision, power reconfiguration, and intergenerational normalization, kpo-fire becomes embedded as a central economic institution. This dependence constrains collective agency, weakens traditional governance, and complicates policy interventions aimed at environmental protection and security. Addressing illegal refining therefore requires not only enforcement but deliberate strategies to dismantle dependency structures through sustainable livelihood reconstruction and social protection mechanisms.

Theme 2: How Kpo-Fire operations generate and sustain economic dependency relationships within affected communities

While previous themes examined livelihood displacement and community-wide dependence on illegal crude oil refining, this theme moves a step further to interrogate how kpo-fire operations actively produce, organize, and sustain economic dependency relationships at interpersonal, household, and communal levels. The analysis demonstrates that dependency is not merely a by-product of illegal refining but a structurally embedded outcome of how refining operations is organized, financed, protected, and socially legitimized. Kpo-fire functions as a relational economy, one that binds individuals and groups into unequal but mutually reinforcing networks of obligation, loyalty, and survival. At the core of this dependency structure is the operational hierarchy of kpo-fire itself. Refining is rarely an individual enterprise; it involves financiers, camp owners, labourers, transporters, security informants, food vendors, and buyers. Each role is embedded within a chain of dependency that ties income access to compliance, silence, and allegiance. Community members described how entry into refining networks often comes with expectations of loyalty, particularly in contexts of enforcement pressure. Once individuals become economically tethered to these networks, exit becomes difficult without risking social and financial exclusion. Thematic analysis reveals that dependency is sustained not through coercion alone but through everyday economic entanglements that normalize obligation. According to one of the FGD participants:

> When you enter kpo-fire, you don't just earn money; you enter a system. Somebody brought you in, somebody is protecting you, and somebody is buying the product. That means your survival is tied to many people. Even if you want to stop, you cannot just walk away because too many people depend on you and you also depend on them (Q. Tamuno, personal communication, FGD, July 2025).

This dependency relationships extend beyond those directly involved in refining to encompass households and extended kin networks. Income from kpo-fire frequently becomes the financial backbone for entire families, supporting dependents who may have no direct connection to the activity. This creates what participants described as "silent dependence," where family members publicly disapprove of illegal refining but privately rely on its proceeds. Over time, moral objections are subordinated to survival imperatives, reinforcing acceptance of the refining economy. The analysis suggests that such household-level dependencies are critical to the endurance of kpo-fire, as they diffuse responsibility and distribute benefits widely enough to prevent collective resistance. Importantly, this form of dependency is not static. It deepens through repeated cycles of crisis and response. During health emergencies, floods, or funerals, refining operators often step in as primary providers of financial assistance. These interventions, while framed as generosity, function as mechanisms of economic capture, binding recipients into relationships of indebtedness. Participants consistently emphasized that accepting help during moments of vulnerability often marks the point at which neutrality becomes complicity.

> When your child is sick and it is kpo-fire money that saves the child, you cannot later say you don't support it. Even if you don't work there, your heart is already inside it. From that day, you are part of the system because you owe it your survival (R. Ebiwari, personal communication, FGD, August 2025).

The analysis also highlights how kpo-fire operations reshape community-level economic norms by redefining responsibility and care. In the absence of effective state welfare systems, refiners increasingly perform quasi-governmental roles, providing what participants described as "emergency governance." This includes settling disputes, funding community projects, and compensating families affected by accidents. While these actions enhance refiners' legitimacy, they simultaneously erode expectations of state accountability. Economic dependency thus becomes institutionalized as communities recalibrate their sense of where support should come from. This recalibration has profound implications for collective action. Communities economically embedded in refining networks often struggle to mobilize against environmental degradation or violence associated with kpo-fire. The analysis reveals a pervasive fear that challenging refining activities could destabilize the fragile economic arrangements sustaining households. This fear is particularly pronounced among those indirectly dependent on refining income, such as traders and service providers. As captured by one participant, "*We know the damage, but who will speak? If refining stops today, who will feed people tomorrow? So even when something bad happens, people keep quiet. Silence has become part of survival here*" (S. Tamuno, personal communication, FGD, July 2025).

From the perspective of the KII participants, particularly discussions with NSCDC officers, dependency relationships undermine enforcement efforts. Officers noted that communities rarely cooperate with security agencies not because of ideological opposition but due to fear of disrupting economic lifelines. Intelligence is withheld, suspects are protected, and enforcement actions are framed as existential threats to community survival. This reflects how dependency relationships translate into collective protective behaviour around illegal refining operations. As expressed by one of the participants:

> The challenge is not that communities love crime; it is that crime feeds them. Once refining becomes the main source of income, people will protect it the same way they protect farms or fishing grounds. That dependency is what makes enforcement difficult (T. Mohammed, personal communication, KII–NSCDC, August 2025).

Tantita staff further emphasized how surveillance interventions inadvertently reinforce dependency by destabilizing alternative livelihood spaces without replacing them. As refining camps are dismantled, households experience sudden income loss, increasing desperation and reinforcing reliance on surviving networks. This cyclical disruption deepens dependency by making refining appear as the only resilient economic option amid uncertainty. According to one of the interviewees: "*Each time operations disrupt refining, people suffer immediately. There is no buffer. That suffering pushes them back into the same networks once things calm down. Without alternatives, dependency is reproduced again and again*" (U. Lawal, personal communication, KII–Tantita, July 2025).

Another critical dimension of dependency explored under this theme is its intergenerational reproduction. Children raised in refining-dependent households internalize economic reliance on kpo-fire as normal. Education, clothing, and social mobility are often financed through refining income, embedding illegality into aspirations for a better life. This creates a paradox where kpo-fire is simultaneously seen as destructive and enabling, reinforcing long-term dependency. Also, gendered dependency also emerged strongly. Women, while often excluded from direct refining activities, become economically reliant on men involved in kpo-fire. This reliance limits women's bargaining power within households and constrains their ability to challenge participation in illegal refining, even when it threatens health and environmental safety. The analysis indicates that dependency relationships are thus unevenly distributed, reinforcing existing inequalities. One participant observed: "*As a woman, you may not support kpo-fire, but when it is the money that feeds your children, what choice do you have? If you talk too much, you risk losing everything. So dependency keeps women silent*" (V. Kuro, personal communication, FGD, August 2025).

Crucially, the theme shows that economic dependency generated by kpo-fire is sustained through uncertainty and fear. The illegality of refining means income is unstable, yet this instability discourages long-term planning outside the refining economy. Communities remain locked into a cycle of short-term survival, unable to invest in sustainable livelihoods due to constant disruption. Dependency thus persists not despite precarity, but because of it. Another community participant noted: "*We know this thing can end anytime, but that fear is why people hold onto it tightly. There is no tomorrow to plan for, only today. And today depends on kpo-fire*" (W. Selekaye, personal communication, FGD, July 2025).

Drawing from the above analysis, one can argue that kpo-fire operations generate and sustain economic dependency relationships through structured operational hierarchies, household reliance, informal welfare provision, moral reframing, and intergenerational normalization. These dependency relationships entrench illegal refining as a central economic institution, complicating enforcement, undermining collective agency, and reproducing vulnerability. Addressing kpo-fire therefore requires interventions that dismantle dependency networks while simultaneously rebuilding legitimate systems of livelihood, care, and governance.

Discussion of Findings

This study set out to interrogate illegal crude oil refining (kpo-fire) in Bayelsa State not merely as an illicit activity, but as a livelihood phenomenon embedded within broader structures of environmental degradation, political economy, and social transformation. The study was organized around the study's four objectives and findings are interpreted as interconnected processes that collectively explain how illegal refining disrupts traditional livelihoods, reshapes occupational choices, and generates enduring forms of economic dependency within oil-producing communities. Based on this, the findings are discussed below in line with the objectives.

Creation of New Forms of Economic Dependency

In relation to the first objective, the findings reveal that participation in illegal refining generates new and complex forms of economic dependency that extend beyond individual actors to encompass households and entire communities. Within the SLF, financial capital generated through illegal refining might appear to compensate for losses in other asset categories. However, the findings demonstrate that this capital is volatile, unevenly distributed, and weakly institutionalized, limiting its transformative potential. Illegal refining income becomes embedded in everyday survival strategies—

funding food consumption, healthcare, education, and social obligations. Over time, households not directly involved in refining become indirectly dependent on its proceeds, creating a web of reliance that normalizes the activity. This aligns with Aziken and Duru’s (2022) observation that informal economies often sustain broader community resilience, but this study complicates that claim by showing how such resilience is built on unstable and environmentally destructive foundations.

From a Dependency Theory perspective, these dynamics mirror classic patterns of dependent development, where economic activity generates income without fostering autonomy or structural transformation. Wealth accumulation is concentrated among a small group of actors—financiers, camp owners, and intermediaries, while the majority remain economically precarious. This intra-community inequality reflects Zulfiqar and Moosvi's (2022) argument that dependency reproduces itself through elite capture and unequal control over productive resources. The findings also highlight gendered and generational dimensions of dependency. Women and non-participating elders often rely on income from male relatives involved in refining, reducing their economic autonomy and capacity to challenge participation in illegal activities. Youths, while initially empowered through income access, become locked into refining networks that limit long-term mobility. Environmental News Nigeria (2025) documents similar patterns of vulnerability, particularly among children exposed to refining-related labour and health risks.

Mechanisms Sustaining Dependency Relationships

The second objective deepens the analysis by identifying the mechanisms through which illegal refining operations generate and sustain dependency relationships over time. The findings show that kpo-fire operates as a relational economy organized around hierarchies of control, obligation, and loyalty. Access to refining opportunities is mediated through networks that tie economic survival to compliance and silence, making exit difficult without significant social and financial costs. A key mechanism sustaining dependency is the informal welfare role played by refining actors. In the absence of effective state welfare systems, refiners often provide emergency support during illness, accidents, or social ceremonies. While these practices enhance their legitimacy, they also entrench dependency by substituting informal patronage for institutional support. Within the SLF, this reflects a reconfiguration of social capital away from collective institutions toward individualized patron-client relationships.

Enforcement practices further reinforce dependency by introducing instability without alternatives. As Tantita surveillance and NSCDC operations disrupt refining activities, households experience sudden income shocks that increase vulnerability and reinforce reliance on surviving networks once operations resume. This cyclical disruption aligns with Dependency Theory’s emphasis on how instability in peripheral economies deepens reliance on extractive activities rather than enabling diversification. Intergenerational transmission also sustains dependency. Children raised in refining-dependent households internalize kpo-fire as a normal livelihood pathway, embedding illegality into future aspirations. This finding echoes concerns raised by Ebiri (2019) and Environmental News Nigeria (2025) regarding the long-term social costs of artisanal refining.

Drawing from each of these findings across the four objectives, we can easily see that illegal crude oil refining in Bayelsa State is best understood as an outcome of intersecting livelihood collapse and structural dependency. The Sustainable Livelihood Framework illuminates how environmental degradation and institutional neglect erode livelihood assets, while Dependency Theory explains why alternative development pathways remain inaccessible. Illegal refining persists not because it is sustainable or desirable, but because it fills a void created by decades of extractive governance and uneven development. This underscores the limitations of enforcement-only responses and highlights the need for interventions that simultaneously restore ecological systems, rebuild livelihood assets, and dismantle dependency structures.

Conclusion

The study comes to the conclusion that the continuation and growth of illicit crude oil refining in Bayelsa State must be interpreted within the larger socioeconomic realities that influence livelihood choices in oil-producing communities rather than only through a criminality or law enforcement lens. Participation in the local refining economy has developed into a deeply ingrained survival system that ties people, households, and community institutions into webs of mutual dependency, according to evidence from the focus groups and interviews. Financiers contribute funds, operators provide technical expertise, youth organizations provide labour and protection, transporters assist distribution, and community gatekeepers control access to refining facilities. A localized economic system where obligations, liabilities, and advantages are shared by all is created by these interwoven roles. As a result, the practice known as "kpo-fire" serves as both an illegal business and an unofficial welfare system that makes up for the Niger Delta's lack of governmental development, destroyed farmlands, diminishing fisheries, and unemployment. The results indicate that many locals view participation in refining as a logical reaction to the environmental damage and structural marginalization brought on by decades of oil exploration. Over time, the activity's financial flows sustain household spending, youth survival, unofficial credit agreements, and even some communal initiatives, strengthening systemic dependence and loyalty. In light of this embeddedness, sudden enforcement-driven crackdowns are inadequate and occasionally detrimental because they frequently upset delicate local livelihoods without addressing the factors that support them. As a result, the study highlights how illegal refining has progressively established itself as a parallel economic structure that flourishes in areas with inadequate formal employment possibilities and governance gaps. In order to address the phenomena, a comprehensive policy approach that incorporates community-centered development initiatives, environmental cleanup, and economic inclusion in addition to security operations is needed. Sustainable substitutes must be reliable, reachable, and able to take the place of the refining networks' current social and commercial roles. Interventions are likely to only produce short-term reductions while the underlying motivations for participation in impacted areas remain intact if the deeply ingrained dependency patterns found in this study are not addressed.

Recommendations

Following the findings and conclusions reached, the study recommends addressing the community-level dependency Structures through Inclusive Economic Governance. The study reveals that illegal refining sustains itself through localized dependency networks and informal welfare arrangements that substitute for absent state support. To dismantle these structures, there is a need to strengthen inclusive economic governance at the community level. This includes revitalizing cooperatives, supporting women-led economic initiatives, and expanding access to microfinance and social protection schemes that are not tied to illegal activities. By institutionalizing legitimate channels of support and credit, communities can gradually shift away from reliance on refining networks as sources of survival and security.

Furthermore, the study's findings highlight the need for a fundamental reorientation of state engagement with oil-producing communities. Development interventions must move beyond symbolic inclusion toward genuine participation in decision-making around resource management, environmental protection, and revenue use. Strengthening accountability mechanisms, ensuring community representation in oil governance structures, and transparently reinvesting oil revenues into local development are essential steps toward rebuilding trust. Without addressing the historical marginalization that underpins livelihood collapse and dependency, efforts to curb illegal refining will remain reactive and fragile.

Lastly, the study suggests that in order to produce more comprehensive empirical insights into the dynamics of illicit crude oil refining and economic dependency in Bayelsa State, future research should use mixed methods and quantitative research approaches. Future quantitative research would allow the measurement of the scale, prevalence, and statistical patterns of these phenomena across various communities, even though the current qualitative study offered a thorough understanding of lived experiences, social relations, and dependency structures surrounding kpo-fire operations. Similarly, by integrating contextual narratives with statistical information, mixed methods research would increase the validity and generalizability of findings and offer a more thorough understanding.

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