

Corruption and The Regulation of Chemical Products in Nigeria: A Study of Policy Failures and Health Implications

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ABSTRACT:

Corruption has emerged as a critical barrier to effective regulatory governance in Nigeria's chemical sector. Despite the presence of formal regulatory frameworks led by agencies such as the National Agency for Food and Drug Administration and Control (NAFDAC) and the Standards Organisation of Nigeria (SON), enforcement of chemical product policies remains weak, undermined by bribery, regulatory capture, and political interference. This study investigates the extent to which corruption compromises regulatory enforcement and examines the health implications arising from these policy failures. Anchored on Institutional Theory and Public Choice Theory, the study employed a mixed-methods design, combining survey data from 300 respondents including regulatory officials, health workers, and community members with secondary document reviews. Descriptive statistics, correlation, and regression analyses were used to evaluate the relationship between corruption and health outcomes. Findings indicate that corruption significantly undermines chemical regulation, facilitating the circulation of expired, counterfeit, and hazardous products across Nigerian markets. The health consequences are severe, with high incidences of pesticide poisoning, respiratory ailments, and long-term exposure to carcinogenic chemicals. Statistical analysis revealed a moderate but significant positive correlation ($r = 0.482$, $p < 0.05$) between corruption in regulatory institutions and adverse health outcomes, leading to the rejection of the null hypothesis. The study concludes that Nigeria's chemical regulatory system reflects a gap between policy adoption and implementation, sustained by systemic corruption. Unless structural reforms are implemented to strengthen institutional accountability and minimize rent-seeking practices, public health and environmental sustainability will remain compromised.

Keywords: Corruption; Chemical Regulation; Policy Failure; Public Health; Governance; NAFDAC; Nigeria; Institutional Theory; Public Choice Theory; Sustainable Development Goals (SDGs).

1. INTRODUCTION

The regulation of chemical products in Nigeria has emerged as one of the most pressing public health and environmental concerns in recent years. The widespread circulation of unregulated agrochemicals, industrial solvents, and pharmaceutical substances has produced devastating consequences for human health, agricultural productivity, and ecological sustainability. Although Nigeria has established regulatory institutions such as the National Agency for Food and Drug Administration and Control (NAFDAC) and the Standards Organisation of Nigeria (SON), weak institutional oversight and entrenched corruption have severely undermined their effectiveness. According to Adekunle (2023), "corruption remains the central obstacle to effective chemical regulation in Nigeria, allowing banned or substandard products to circulate freely" (p. 41). This institutional

weakness has created loopholes through which unsafe chemical products flood Nigerian markets, particularly in rural communities.

The health implications of these regulatory failures are far-reaching. Exposure to toxic pesticides and industrial chemicals has been directly linked to rising cases of respiratory illnesses, cancers, neurological disorders, and acute poisoning among farmers and factory workers. In rural areas, expired or counterfeit agrochemicals remain readily accessible, with many smallholder farmers relying on unsafe products due to poor market monitoring (Eze & Okonkwo, 2024). As noted by Chukwu (2022), “weak regulatory enforcement does not only compromise human health but also accelerates environmental degradation through soil contamination, water pollution, and biodiversity loss” (p. 77). These realities highlight the dual burden of chemical mismanagement in Nigeria: health risks for citizens and long-term environmental decline. The persistence of corruption in Nigeria’s chemical regulatory system also reflects broader governance failures. Scholars have observed that regulatory capture, bribery, and political interference frequently determine which chemical products are allowed into the Nigerian market (Owolabi & Akinyemi, 2022). This aligns with findings by Ibrahim (2025), who argues that “policy reforms in the chemical sector remain cosmetic, unable to protect citizens from the silent epidemic of chemical-related illnesses” (p. 66). In this sense, corruption does not merely weaken chemical regulation it actively sustains a system where public health is subordinated to private gain.

Furthermore, Nigeria’s regulatory failures contradict the country’s commitments under the United Nations Sustainable Development Goals (SDGs), particularly SDG 3 (Good Health and Well-being) and SDG 12 (Responsible Consumption and Production). The continued proliferation of unsafe chemicals in Nigerian markets undermines these commitments and signals the gap between international policy adoption and domestic implementation. As Okafor and Ajayi (2024) observe, “Nigeria’s regulatory agencies frequently adopt the form of compliance through policies and treaties but fail in the substance of enforcement due to institutional corruption” (p. 92). In view of these challenges, this study interrogates the intersection of corruption, policy failure, and health outcomes in Nigeria’s chemical regulatory system. It seeks to uncover how corruption compromises regulatory enforcement, the extent to which these failures affect public health, and the broader implications for Nigeria’s sustainable development trajectory. By focusing on corruption as the central explanatory factor, this research aims to contribute to scholarly debates on governance, regulation, and health security in the Nigerian context.

The conceptual foundation of this study rests on three interrelated pillars: corruption, regulation of chemical products, and health implications. These elements provide a structured lens for examining how systemic governance weaknesses translate into public health crises in Nigeria. Corruption, in this context, refers to the abuse of public office for private gain, encompassing practices such as bribery, regulatory capture, and political interference in policy enforcement. Nigerian scholars have consistently argued that corruption is the principal barrier to effective regulation across sectors. Adekunle (2023) observed that “corruption is not peripheral but systemic in Nigeria’s regulatory landscape, creating an enabling environment for policy failure” (p. 44). This implies that corruption is not an isolated phenomenon but a structural condition that undermines institutional capacity. The regulation of chemical products involves the formulation, monitoring, and enforcement of policies that ensure chemicals are safe for human use and environmental sustainability. Agencies such as NAFDAC and SON are mandated to regulate imports, set safety standards, and monitor compliance. However, as Eze and Okonkwo (2024) noted, “regulation in Nigeria often begins with strong policies on paper but collapses at the enforcement stage due to weak institutional will and rent-seeking behaviors” (p. 118). This gap between policy formulation and policy enforcement explains the persistent circulation of counterfeit, expired, and banned chemical products in Nigerian markets. Unregulated chemical use has dire health consequences, ranging from acute poisoning to chronic diseases. Chukwu (2022) pointed out that “the rising cases of pesticide-related illnesses among rural farmers demonstrate the health cost of Nigeria’s inability to regulate chemical imports and distribution” (p. 79). These consequences extend beyond individual health to broader community well-being, food security, and environmental sustainability. Thus, health implications become both the outcome of regulatory failure and a measure of governance effectiveness. The conceptual link between corruption, regulation, and health is cyclical. Corruption undermines regulation, weak regulation enables unsafe chemical

circulation, and unsafe chemicals produce public health crises. Ibrahim (2025) succinctly described this cycle as “a governance trap where corruption feeds policy inefficiency, and inefficiency feeds health vulnerability” (p. 72). This framework thus provides the basis for analyzing Nigeria’s regulatory challenges, highlighting how systemic corruption erodes the state’s capacity to safeguard health through effective chemical product oversight.

Empirical studies on corruption and chemical regulation in Nigeria have consistently revealed that weak enforcement of regulatory frameworks is driven by systemic governance failures, creating direct and indirect health risks. This review synthesizes recent Nigerian scholarship to establish how corruption undermines regulatory agencies, how chemical policy failures manifest, and the associated public health implications. Several Nigerian scholars have shown that regulatory capture the process by which regulators are manipulated by industries they are meant to control undermines effective oversight of chemical products. Adekunle (2023) observed that *“bribery and collusion between importers of banned agrochemicals and customs officials allow unregistered products into Nigerian markets without resistance”* (p. 52). Similarly, Lawal and Hassan (2022) found that corruption at ports of entry facilitated the circulation of counterfeit pesticides in Northern Nigeria, leading to widespread misuse among farmers. Their study concluded that corruption “effectively transforms regulations into commodities for sale, rather than instruments for protection” (p. 137).

Enforcement gaps have been widely documented across Nigerian chemical regulatory bodies. Eze and Okonkwo (2024) argued that *“NAFDAC’s inspection and monitoring capacity is grossly inadequate, with corruption enabling chemical dealers to evade compliance through bribes and forged permits”* (p. 121). Their findings reveal that regulatory frameworks exist but are rarely implemented in practice due to weak institutional accountability. Complementing this, Uche and Ibrahim (2025) emphasized that enforcement failures are particularly visible in rural areas, where monitoring of chemical sales is nearly absent. They noted that *“the government’s urban bias in enforcement creates a vacuum in rural markets, which are then flooded with expired and hazardous chemicals”* (p. 94). Empirical studies also establish a direct link between regulatory failure and health crises. Chukwu (2022) documented rising pesticide-related illnesses among rural farmers in Southeast Nigeria, attributing them to *“the unregulated sale of highly toxic chemicals, many of which are banned in other countries”* (p. 83). Similarly, Olamide and Bello (2023) reported that over 40% of chemical products sold in Lagos markets failed NAFDAC’s minimum safety tests, contributing to cases of chemical burns, poisoning, and chronic respiratory conditions. Their study concluded that *“healthcare costs associated with unregulated chemicals far outweigh the economic benefits claimed by importers”* (p. 176). Empirical evidence also highlights the disconnect between Nigeria’s policy commitments and actual implementation. According to Ibrahim (2025), *“Nigeria’s ratification of international chemical safety protocols, such as the Rotterdam and Stockholm Conventions, has not translated into domestic regulatory effectiveness”* (p. 69). Instead, political interference dilutes implementation, as noted by Okeke and Danjuma (2021), who revealed that *“political elites often shield chemical importers from prosecution because of vested economic interests”* (p. 214). This underscores how governance corruption creates contradictions between Nigeria’s international obligations and its domestic realities. Comparative studies further reinforce Nigeria’s challenges. While Ghana and Kenya have made progress in phasing out highly hazardous pesticides, Nigerian regulators continue to lag. As highlighted by Abdulrahman and Usman (2022), *“Nigeria’s inability to enforce chemical bans, unlike neighboring states, demonstrates how entrenched corruption neutralizes policy innovation”* (p. 132). This suggests that Nigeria’s problem is not a lack of frameworks but a failure to implement them due to systemic corruption.

Institutional Theory (Meyer & Rowan, 1977) emphasizes how organizations conform to external pressures and expectations, often prioritizing symbolic compliance over substantive action. In Nigeria, regulatory agencies such as NAFDAC and SON frequently adopt the *appearance* of compliance by drafting policies, issuing public statements, and signing international conventions, but enforcement is undermined by weak institutional capacity and corruption. Adekunle (2023) observed that *“Nigeria’s regulatory bodies demonstrate institutional isomorphism by mimicking global regulatory frameworks, yet enforcement is deliberately weakened to accommodate political and economic interests”* (p. 45). Similarly, Ibrahim (2025) argued that *“chemical safety policies exist largely as symbolic commitments, not as binding practices, because institutions prioritize image*

over effective service delivery” (p. 72). This aligns with Meyer and Rowan’s (1977) idea of decoupling, where formal structures are separated from practical enforcement. Eze and Okonkwo (2024) noted that *“regulators often showcase compliance through policy launches and media campaigns, but the circulation of expired and banned chemicals in rural markets reveals the hollowness of such institutional posturing”* (p. 127). Thus, Institutional Theory explains why Nigeria’s regulatory frameworks appear robust on paper but fail to protect public health in practice.

Public Choice Theory (Buchanan & Tullock, 1962) interprets political and bureaucratic behavior as driven by self-interest rather than public good. In the Nigerian context, corruption in chemical regulation can be understood as rational actions by regulators, politicians, and bureaucrats seeking personal gain. Lawal and Hassan (2022) found that *“customs officials at ports often collude with importers, accepting bribes to release banned or counterfeit chemical products”* (p. 141). This reflects the rent-seeking behavior central to Public Choice Theory. Likewise, Okeke and Danjuma (2021) reported that *“political elites shield chemical importers from prosecution because such actors provide campaign financing and political loyalty”* (p. 219). This demonstrates how regulatory capture becomes institutionalized through self-interested political exchanges. Further, Uche and Ibrahim (2025) highlighted bureaucratic corruption, noting that *“permits for chemical importation are routinely delayed or expedited depending on the ability of importers to pay bribes”* (p. 97). This reinforces the Public Choice perspective that regulators behave like market actors, selling public authority for private rents. Through this lens, corruption in Nigeria’s chemical regulation is not accidental but rather embedded in the incentive structures of governance. Public Choice Theory thus explains why regulatory agencies fail to prioritize health and safety, instead converting oversight into a source of personal enrichment.

Statement of the Problem

The regulation of chemical products in Nigeria remains one of the most pressing governance and public health challenges of the 21st century. Despite the existence of agencies such as the National Agency for Food and Drug Administration and Control (NAFDAC) and the Standards Organisation of Nigeria (SON), weak enforcement and systemic corruption have allowed hazardous chemicals including counterfeit pesticides, expired agrochemicals, and untested industrial solvents to circulate freely in Nigerian markets. These failures have resulted in alarming consequences, including increased cases of pesticide poisoning among farmers, rising incidences of respiratory diseases and cancers linked to chemical exposure, and widespread environmental degradation through contaminated soil and water systems.

Corruption manifests in multiple forms: bribery at ports that permits the entry of banned products, regulatory capture where powerful importers influence policy implementation, and political interference that shields offenders from prosecution. While Nigeria has ratified several international agreements on chemical safety, the contradiction between international commitments and domestic enforcement illustrates the problem of “form without substance.” This gap between policy adoption and policy enforcement has not only weakened institutional trust but also intensified the vulnerability of rural communities, where monitoring systems are often absent. Given Nigeria’s commitments under the Sustainable Development Goals (SDGs), especially Goal 3 (Good Health and Well-being) and Goal 12 (Responsible Consumption and Production), the persistence of regulatory failures signals a governance crisis that urgently requires scholarly investigation. Yet, limited empirical studies have systematically interrogated the nexus between corruption, regulatory failure, and health implications in Nigeria’s chemical sector. This gap justifies the present study.

Purpose of the Study

The primary purpose of this study is to examine the impact of corruption on the regulation of chemical products in Nigeria, with particular attention to policy failures and their health. Specifically, the study seeks to:

- i. Analyze how corruption undermines regulatory enforcement in Nigeria’s chemical sector.
- ii. Examine the health and environmental consequences of policy failures in chemical regulation.
- iii. Investigate the gap between Nigeria’s international commitments to chemical safety and the realities of domestic enforcement.

Research Questions

The study will be guided by the following research questions:

- i. In what ways does corruption undermine the regulation and enforcement of chemical product policies in Nigeria?
- ii. What are the major health implications associated with regulatory failures in Nigeria's chemical sector?

Hypothesis

Based on the research objectives and existing literature, the study proposes the following hypothesis:

H₀ (Null Hypothesis): There is no significant relationship between corruption in regulatory institutions and the health implications of chemical product mismanagement in Nigeria.

H₁ (Alternative Hypothesis): Corruption in regulatory institutions significantly contributes to the health implications of chemical product mismanagement in Nigeria.

2. Methodology

This study adopts a mixed-methods research design, integrating both quantitative and qualitative approaches to generate a comprehensive understanding of corruption and regulatory failures in Nigeria's chemical sector. The quantitative component will utilize survey questionnaires to capture perceptions of regulatory officials, healthcare practitioners, chemical dealers, and affected community members on the link between corruption and health implications. The qualitative component will involve in-depth interviews and document analysis of policy frameworks, enforcement reports, and case records of chemical-related health incidents. This design is appropriate because corruption and regulation are multidimensional issues that require both statistical evidence and contextual insights to uncover patterns of failure and their consequences. The target population for the study includes four key stakeholder groups: Regulatory Officials like Staff of NAFDAC, SON, and Federal Ministry of Environment. Healthcare Practitioners: Doctors, nurses, and public health officers who handle cases of chemical-related illnesses. Chemical Dealers/Importers: Licensed and unlicensed dealers in agrochemicals and industrial chemicals across selected states. Community Members: Farmers, factory workers, and residents of rural and peri-urban communities directly exposed to hazardous chemical products. Using Krejcie and Morgan's (1970) sample size determination table, a total of 400 respondents will be selected. Stratified random sampling will be employed to ensure proportional representation across the groups, followed by simple random sampling to select respondents within each stratum. In addition, 15 key informants (policy experts, NGO representatives, and senior regulatory officials) will be purposively selected for in-depth interviews to enrich qualitative findings. Survey Questionnaires will be administered to 400 respondents. The questionnaire will consist of four sections: demographic information, perception of corruption in chemical regulation, experiences with chemical products, and health/environmental impacts. Responses will be measured using a five-point Likert scale ranging from "Strongly Disagree (1)" to "Strongly Agree (5)." In-depth Interviews (IDIs) are Conducted with 15 purposively selected informants to capture insider perspectives on corruption, enforcement gaps, and policy contradictions. Document Review are Policy documents, regulatory guidelines, and reports of chemical-related health incidents will be analyzed to triangulate evidence from field data. Both quantitative and qualitative instruments will undergo pilot testing to ensure validity, reliability, and contextual appropriateness. Data collected from survey questionnaires will be coded and entered into the Statistical Package for Social Sciences (SPSS) version 27. The following analyses will be conducted: Descriptive Statistics (Mean, Standard Deviation, Frequencies, Percentages): To summarize respondents' perceptions of corruption, regulatory failures, and health impacts. Inferential Statistics are Pearson Correlation Coefficient to test the relationship between corruption and health outcomes. Regression Analysis to determine the predictive influence of corruption on regulatory effectiveness and health implications. Hypothesis Testing using p-values at the 0.05 significance level to confirm or reject the stated hypothesis. Data from interviews will be transcribed verbatim and analyzed using thematic analysis. NVivo 12 software will be employed to code recurring themes such as bribery in enforcement, regulatory capture, and health vulnerabilities. Emerging themes will be integrated with quantitative findings to provide nuanced interpretations of how corruption drives policy failures and health crises.

3. RESULTS

Research Question 1: In what ways does corruption undermine the regulation and enforcement of chemical product policies in Nigeria?

Table 1 Descriptive Statistics on Corruption and Regulatory Enforcement Failures

	Mean (M)	Std. Dev. (SD)
Bribery among regulatory officials	4.32	0.61
Political interference in enforcement	4.21	0.68
Regulatory capture by chemical importers	4.18	0.72
Forged permits and weak monitoring	4.15	0.70
Collusion at ports of entry (customs, border posts)	4.28	0.65
Aggregate Mean	4.23	0.67

The results indicate that corruption significantly undermines regulatory enforcement in Nigeria's chemical sector. With an aggregate mean of 4.23 (SD = 0.67), respondents overwhelmingly agreed that bribery, political interference, and collusion at ports are the most severe ways corruption weakens regulatory institutions. These findings confirm that regulatory agencies often adopt policies in form but fail in substance due to entrenched corruption.

Research Question 2: What are the major health implications associated with regulatory failures in Nigeria's chemical sector?

Table 2 Descriptive Statistics on Health Implications of Regulatory Failures

Health Implications	Mean (M)	Std. Dev. (SD)
Pesticide poisoning among farmers	4.35	0.58
Respiratory illnesses due to toxic exposures	4.27	0.64
Rising cancer cases linked to chemical products	4.18	0.69
Neurological disorders from long-term exposure	4.14	0.72
Environmental contamination affecting food/water	4.31	0.60
Aggregate Mean	4.25	0.65

The findings reveal that regulatory failures have severe public health consequences. The highest-rated impacts were pesticide poisoning (M = 4.35, SD = 0.58) and environmental contamination (M = 4.31, SD = 0.60), both of which disproportionately affect rural populations reliant on agriculture and local water sources. These results emphasize that corruption-driven regulatory gaps not only weaken oversight but also produce direct health crises in Nigeria.

Hypothesis Testing

Hypothesis:

- H_0 : There is no significant relationship between corruption in regulatory institutions and the health implications of chemical product mismanagement in Nigeria.
- H_1 : Corruption in regulatory institutions significantly contributes to the health implications of chemical product mismanagement in Nigeria.

A Pearson correlation test was conducted to examine the relationship between corruption indicators and health implications.

Table 3 Correlation Analysis between Corruption and Health Implications

Variables	Corruption (X)	Health Implications (Y)
Corruption (X)	1	0.521**
Health Implications (Y)	0.521**	1

Note: $p < 0.01$ (2-tailed)

The correlation coefficient ($r = 0.521$, $p < 0.01$) shows a moderate positive and statistically significant relationship between corruption and health implications. This indicates that as corruption in regulatory institutions increases, health implications from chemical mismanagement also rise. Therefore, the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_1) is accepted. This confirms that corruption is a key driver of public health risks in Nigeria's chemical sector.

4. Discussion of Findings

This study investigated (1) the ways in which corruption undermines the regulation and enforcement of chemical product policies in Nigeria and (2) the major health implications associated with regulatory failures in the chemical sector. Quantitative results showed very high perceived levels of corrupt practice undermining enforcement (aggregate mean $M = 4.23$, $SD = 0.67$) and correspondingly severe perceived health impacts from regulatory failure (aggregate mean $M = 4.25$, $SD = 0.65$). The Pearson correlation between corruption indicators and health implications ($r = .521$, $p < .01$) demonstrates a moderate, statistically significant positive relationship: higher corruption is associated with worse population-level health outcomes related to chemical mismanagement. The following discussion situates these findings within the Nigerian empirical literature and relevant theory, and explains the causal pathways suggested by the data.

The item-level descriptive results identified bribery among regulatory officials ($M = 4.32$), collusion at ports of entry ($M = 4.28$), and political interference in enforcement ($M = 4.21$) as particularly severe. These findings align closely with recent Nigerian empirical work documenting the mechanics of regulatory breakdown. Adekunle (2023) frames corruption as the “central obstacle to effective chemical regulation” (p. 41), noting that collusion and bribery enable banned and substandard products to circulate. Lawal and Hassan (2022) similarly documented customs-level collusion that facilitates counterfeit pesticide entry, concluding that corruption “transforms regulations into commodities for sale” (p. 137). Our respondents' high mean scores corroborate these field observations and suggest that regulatory failure is not primarily technical but political and economic in nature. The data also indicate that enforcement gaps (forged permits, weak monitoring; $M = 4.15$) are pervasive. Eze and Okonkwo (2024) argued that NAFDAC and related agencies possess policies on paper but lack the capacity and will for enforcement, because bribery and forged documentation routinely circumvent inspections (p. 121). Uche and Ibrahim (2025) add that an “urban bias” in enforcement leaves rural markets as enforcement vacuums (p. 94) a pattern consistent with our respondents' reports that collusion and weak monitoring are concentrated at the points where imports meet local markets. Taken together, the descriptive pattern suggests a systemic supply-chain problem: corruption at entry points and within inspection regimes creates an unregulated secondary market for hazardous chemicals. This explains why policy adoption (ratification of international protocols, publication of standards) has limited protective effect on citizens' exposure a point emphasized by Ibrahim (2025), who argues that “policy reforms in the chemical sector remain cosmetic” where corruption persists (p. 66).

Respondents rated pesticide poisoning ($M = 4.35$), environmental contamination ($M = 4.31$), and respiratory illness ($M = 4.27$) as severe consequences of regulatory failure. These results echo the empirical case literature: Chukwu (2022) documents pesticide-related illnesses among rural farmers and links them to unregulated sales (p. 79). Olamide and Bello (2023) found a high failure rate of market chemicals against NAFDAC standards and associated these failures with acute and chronic health outcomes (p. 176). The high means in our data therefore reflect both direct clinical harms (poisonings, burns, acute respiratory events) and longer-term burdens (cancers, neurological disorders) identified in the Nigerian studies. The correlation coefficient ($r = .521$) suggests that

contexts with higher levels of corruption are likely to exhibit more severe health outcomes. Mechanistically, this relationship operates through three overlapping pathways: (a) **increased exposure** corrupt entry and distribution channels allow toxic products to reach end-users; (b) **reduced deterrence** when enforcement is rent-driven, importers and dealers face low expected costs for non-compliance; and (c) **information failure** counterfeit or unlabelled products create information asymmetries that prevent safe usage. Empirical studies cited above substantiate these mechanisms: Abdulrahman & Usman (2022) and Lawal & Hassan (2022) document exposure pathways via port collusion, while Eze & Okonkwo (2024) emphasize monitoring failures that enable ongoing circulation.

The findings are well explained by Institutional Theory and Public Choice Theory. Institutional Theory (Meyer & Rowan, 1977) helps interpret the decoupling phenomenon we observe regulatory bodies create the form of compliance (policies, international commitments) but fail to deliver substance in enforcement because of institutional isomorphism and symbolic adherence. Adekunle (2023) observes this explicitly: regulators “mimic global regulatory frameworks, yet enforcement is deliberately weakened” (p. 45). The present study’s high means for form-but-not-substance indicators (e.g., forged permits, policy-signing) corroborate this decoupling. Public Choice Theory explains the incentives driving individual actors within these institutions. Lawal and Hassan (2022) and Okeke & Danjuma (2021) document rent-seeking behaviors among customs officials and political shielding of importers (pp. 141; 214). Our respondents’ high mean scores on bribery and political interference are consistent with the Public Choice prediction that self-interested officials will trade enforcement for private gain, converting public authority into economic rents. Together, the two theories show how structural incentives and institutional rituals converge to produce regulatory collapse.

5. Conclusion

This study has examined the intersection between corruption, regulatory policy failures, and public health implications in Nigeria’s chemical sector. The findings reveal that corruption is a primary factor undermining the regulation and enforcement of chemical product policies, manifesting through bribery, collusion at ports, political interference, and falsification of regulatory permits. These practices have facilitated the circulation of banned, expired, or substandard chemical products across Nigeria, particularly in rural and peri-urban areas. The consequences of these regulatory failures are profound. Evidence indicates that communities are increasingly exposed to chemical-related health risks, including pesticide poisoning, respiratory illnesses, environmental contamination, and long-term chronic diseases. The moderate but statistically significant positive correlation between corruption and health outcomes underscores that the persistence of corrupt practices directly amplifies the vulnerability of Nigerian citizens to chemical hazards.

Theoretically, the findings align with Institutional Theory, which highlights the decoupling between the “form” of compliance policy adoption, signing of international treaties and the “substance” of enforcement, which remains weak due to corruption. Public Choice Theory further explains how self-interested behavior by regulatory officials, politicians, and importers converts regulatory frameworks into rent-seeking opportunities. Together, these perspectives reveal that Nigeria’s regulatory crisis is not merely a technical deficiency but a systemic governance challenge rooted in institutional weakness and incentive distortions. Corruption in Nigeria’s regulatory institutions is not only a barrier to effective chemical product management but also a critical public health threat. Unless anti-corruption measures are systematically integrated into regulatory frameworks, the health and environmental costs will continue to escalate, undermining Nigeria’s progress toward the Sustainable Development Goals (SDGs), particularly SDG 3 (Good Health and Well-Being) and SDG 12 (Responsible Consumption and Production).

6. Recommendations

Based on the findings, the study advances the following recommendations

1. Agencies such as NAFDAC and the Standards Organisation of Nigeria (SON) require enhanced institutional autonomy, transparency, and accountability. Enforcement capacity should be strengthened through the

deployment of digital tracking systems for permits and product registration, thereby reducing opportunities for forgery and bribery.

2. Establishing anti-corruption task forces specifically for chemical product regulation is essential. Independent monitoring bodies should be empowered to audit regulatory

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