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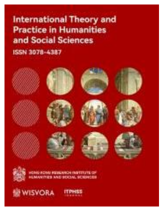


# Strategic Adaptation or Development Diplomacy? Chinese Green Investment and Institutional Constraints in Equatorial Guinea's Energy Transition

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**Abstract**

The West African nation of Equatorial Guinea, which has extensive natural resources, has multiple difficulties providing power supplies, building infrastructure, and developing various economic sectors. The worldwide push for green energy and sustainable development has made external influences most notable, particularly through China, which now drives the developmental paths of African nations. China's business strategies in Equatorial Guinea are evaluated by examining its green energy deployment and infrastructure development activities. A qualitative study investigates China's strategic objectives and implementation strategies and assesses prolonged development effects on Equatorial Guinea using policy document analysis, field reports, and expert interviews.

Chinese investments emerge from three fundamental drivers: resource safety, geopolitical control, and Belt and Road Initiative expansion goals. Infrastructure projects delivered better connectivity and energy resources to the nation, yet governance problems, sustainability issues, and local personnel development remain unresolved. The article recommends that China guide its investments toward Equatorial Guinea's sustainable development targets because this alignment would reduce dependency and protect ecological health.

The research expands knowledge on China–Africa relationships by examining Equatorial Guinea in detail and analyzing China's investment trends that reshape African development strategies.

## 1. Introduction

The global shift towards renewable energy is more than a strategic development agenda - it is a compelling imperative to tackle two of the world's most pressing issues: climate change and sustainable economic development. With increasing carbon emissions threatening ecosystems and economies, renewable energy systems have become the solution that promises to reduce carbon footprints, support sustainable development and meet the expanded global demand for energy.

However, achieving these promises requires more than technological innovation - it also requires deep policy reform, major investments and the capacity to overcome infrastructural and institutional barriers. In this context, the African continent, home to an abundance of renewable energy resources is at a key crossroads in its energy transition (Acaru S. F., 2022).

Numerous African nations are facing two interrelated and simultaneous challenges associated with the process of energy modernization. First, they must modernize infrastructure that is out of date and ineffective — much of it is based on a model of reliance on fossil fuels. Second, they must modernize their model of energy supply and generation to meet the increasingly challenging environmental and sustainability expectations set by the global economy. A combination of these two challenges places the development of energy supply and generation in Africa into a challenging context. While the continent has numerous renewable sources available — from solar and wind to hydro and biomass — these resource bases remain substantially unexploited for multiple logistical, financing, and delivery considerations. Infrastructure challenges have prevented the region's grid system from polluting developmental conditions, and reliable access to energy remains mainly in urban areas and populations (Jain A. M., The role of predictive analytics in e-commerce conversion rate optimization, 2025).

Equatorial Guinea illustrates that paradox. The economy, which has been highly reliant on oil since the 1990s, has fostered growth, but also has created a vulnerability to fluctuations in oil prices in the country's economy. Heavy dependency on the export of hydrocarbons limits the possibility of economic diversification and the timing of investments in renewable energy and modern infrastructure. Even when renewable potential is well documented (especially for solar and hydro), the factors of limited financing, not enough human capital, and weak regulatory support create too many challenges to its initiation. Rural areas have and continue to experience energy poverty, and urban grids are still unreliable and inefficient.

This energy access and infrastructure development issue is compounded by a broader context in which Equatorial Guinea's economic future is closely tied to foreign investments. Foreign direct investment (FDI) has become essential to the country's development strategy, particularly as it seeks to modernize its infrastructure and diversify its energy sources. The involvement of foreign investors, particularly from China, has played a pivotal role in shaping Equatorial Guinea's energy landscape. In this context, developing renewable energy infrastructure is crucial to the nation's modernization efforts (Ahmad, 2022).

China has emerged as a major player in Africa's development landscape, particularly through its Belt and Road Initiative (BRI), which aims to strengthen economic ties between China and various countries across the globe, including those in Africa. The BRI provides a framework for China's foreign investment strategies, which have profoundly impacted Africa's infrastructure, including energy systems. In Equatorial Guinea, Chinese investment has successfully implemented large-scale infrastructure projects and green energy initiatives. These investments, often in concessional loans, turnkey projects, and public-private partnerships, align with China's broader economic and geopolitical objectives. These objectives include securing access to Africa's natural resources, expanding China's market reach, and increasing its political influence across the continent.

Equatorial Guinea's strategic positioning in Africa's energy landscape has made it an essential partner in China's broader African policy. The combination of oil resources, potential for renewable energy development, and geopolitical importance has intensified Chinese foreign direct investment in the country (Akinola, 2022). Through its involvement in the energy sector, China seeks to help Equatorial Guinea develop a more reliable and sustainable energy infrastructure that will meet the nation's growing demand for power and align with global climate goals. However, the collaboration between the two countries is not without its challenges. While Chinese investments bring much-needed capital and expertise, they also raise questions about the long-term sustainability of these investments, the environmental impact of large infrastructure projects, and the implications for local communities.

This research examines two fundamental questions: How do institutional and governance conditions mediate the developmental outcomes of Chinese FDI in Equatorial Guinea's green-energy and infrastructure sectors? How does Chinese Foreign Direct Investment (FDI) impact the development of green energy infrastructure in Equatorial Guinea? What strategies does China employ in its engagement with Equatorial Guinea, and what are the resulting policies and outcomes of these strategies?

The research explores the intersection of China's foreign economic policy and Equatorial Guinea's energy and development plans, particularly in the context of green energy initiatives. By examining this relationship, the study seeks to shed light on the role of Chinese FDI in fostering the energy transition in Equatorial Guinea and to provide policy recommendations for future engagements (Atitianti, Does Chinese foreign direct investment improve the welfare of Africans?, 2022).

The article is structured as follows: Section 2 provides an in-depth analysis of China-Africa economic relations, specifically focusing on the role of green energy development within these relations. Section 3 outlines the methodological approach used in the study, including the case examination. Section 4 presents the analysis of the findings, highlighting key insights from the case study. Finally, Section 5 discusses the policy implications of the research and offers recommendations for future Chinese involvement in Equatorial Guinea's green energy sector (Carfora, 2024).

## 2. Literature Review and Theoretical Framework

### 2.1. FDI and Development Theories

Foreign direct investment (FDI) is a pivotal development mechanism within global political economy theories and international development research. According to classic economic models, FDI serves host countries by bringing in capital, technology transfers, and enhanced management skills. Research indicates that these advantages promote productivity increases with new employment opportunities and improve infrastructure development. The analysis of local context became essential in modern viewpoints regarding the subject. The performance of FDI depends strongly on the governance level of host countries while also requiring high absorptive capacity, strong institutions, and specific sector concentration. The sustainable transformation of Equatorial Guinea's economy depends on the national strategic alignment of foreign direct investment with key sectors, especially infrastructure and green energy.

The scholarly research regarding Chinese investment activities in sub-Saharan Africa has expanded noticeably throughout recent years. China uses its state-led FDI policy through state-owned companies and China Exim Bank financial resources to build massive infrastructure projects. China's investment involves building roads and hydropower plants and establishing ports and telecommunication systems. The Chinese investment system stands apart from Western standards by joining loan deals with infrastructure projects operating under concessional payment terms and political nonintervention policies attractive to many African governments.

### 2.2. China’s State-Led FDI and the BRI

The Belt and Road Initiative (BRI) is China's largest framework for worldwide investments and targets Africa. The BRI started with building fossil-fuel-powered infrastructure until China added principles of ecological civilization and green development that mirror domestic environmental policy goals. The Chinese investment flow has transformed toward renewable projects such as solar installations, innovative grid systems, and sustainable city building, which presents fresh opportunities for African green development.

Different researchers present conflicting perspectives about the effects of Chinese FDI on development in Africa. According to certain researchers, China delivers the needed infrastructure that Western donor organizations lack, so China stimulates economic growth through its investments. Chinese capital's investments face criticism regarding funding sustainability, unclear organizational practices, and restricted benefits for local workers, and environmental hazards. The academic community agrees that strategic policy structures and proper institutional management systems can produce beneficial outcomes when Chinese investment supports Africa's sustainable development needs (Ebekozien, 2023).

Research about Chinese investment in Africa has mainly concentrated its analysis on the four major economic powers of Nigeria, Ethiopia, Kenya, and South Africa. The academic community tends to devote little research to the strategically oriented yet diminutive nation of Equatorial Guinea. This research deficiency is vital because Chinese investment approaches do not follow one universal pattern throughout Africa. Equatorial Guinea demands individual analysis of its political organization because it relies on petroleum for economic vitality and its sustainable energy future (Donou-Adonsou F. &., 2018).

This paper addresses a research gap by analyzing Chinese foreign direct investment policies in Equatorial Guinea. It elaborates on the relationship between Chinese numerical investments and Equatorial Guinea's simultaneous pursuit of green energy objectives and infrastructure advancements, thus delivering novel empirical evidence for Sino-African cooperation and foreign direct investment in development research.

## 3. Methodology

### 3.1. Approach

This qualitative policy analysis framework identifies policy implications alongside the characteristics and scope of Chinese FDI in Equatorial Guinea's green energy and infrastructure sectors. The case study methodology is adequate for exploring intricate development patterns that link domestic organizations with international financiers and transnational structures. The analyst can determine how local economic approaches coordinate with international investment frameworks through this research approach while focusing on concrete empirical circumstances (Ezie, 2024).

The research uses primary and secondary data sources to create a strong and confirmed analytical structure. The study incorporates Equatorial Guinea's official policy documents, Horizon 2020, Horizon 2035, and Harmonia 2035, as fundamental primary evidence. Official national and international collaborations, memoranda of understanding (MoUs), and investment partnership frameworks published by the Government of the People's Republic of China are fundamental reference points. Strategic documents illustrate objectives, funding distribution related to green infrastructure and energy transition, and specific implementation deadlines (Ghorbani Y. Z., 2024).

### 3.2. Data sources

The research employs data from three quantitative Chinese FDI repositories, including the China Global Investment Tracker (CGIT) and the China Africa Research Initiative (CARI) at Johns Hopkins University and UNCTAD's World Investment Reports. Wedding project-level information obtained from three FDI databases allows researchers to conduct a fact-based examination of Chinese investment in Equatorial Guinea.

The research includes institutional evaluations compiled by the World Bank, the African Development Bank (AfDB), and the United Nations Development Program (UNDP). The organizations prepared assessments about infrastructure shortfalls, public-private partnership performance, and energy access data points for sub-Saharan African territories. Studying existing regional policy documents from the Economic Community of Central African States (ECCAS) enables better comprehension of multilateral frameworks influencing investments across the area.

This study draws its information from media reports and official press releases of China Machinery Engineering Corporation (CMEC) and Sino Hydro, as well as major Chinese state-owned enterprises (SOES). Major infrastructure and power-related projects in Equatorial Guinea constitute the core business sector of these state-owned enterprises. Project documentation from their companies delivers historical timelines alongside monetary agreements, project benchmarks, and details about their interactions with stakeholders to support the official policy data with practical operational data.

Multiple restrictions exist even though researchers conducted meticulous triangulation. The official documents released by government entities show political interests through positive project analyses with hidden risks and hostile opposition. The reliability of media reports regarding international news varies because of media biases worldwide and different editorial ideologies. The direct dissemination of investment data remains limited among Chinese business operations in smaller African countries, including Equatorial Guinea. Different sources usually present disaggregated data, which is fragmented and unverified through multiple reporting methods (Ghorbani Y. Z., 2024).

### 3.3. Analytical lens

The study implements critical interpretivism because this framework interprets knowledge development through political-economic frameworks. The research approach provides the analyst with tools to examine texts in their literal sense and proper context and investigates power imbalances, institutional goals, and stakeholder objectives. The researcher applies verification controls, source triangulation, and contextual reading as evaluation tools to draw policy-oriented results without misinterpretation.

Through this approach, researchers can comprehensively understand how Chinese investments relate to Equatorial Guinea's domestic development project and its role in regional infrastructure development. This analytical system lays the foundation for generating policy suggestions by using actual evidence and critical theories.

Table 1: Data Sources

| Type | Sources |
|---|---|
| Government Document | Equatorial Guinea and China |
| FDI databases | Chinese FDI databases |
| Reports | World Bank, AfDB, UNCTAD, CARI |

| | |
|---|---|
| Media and company disclosures | CMEC, Sinohydro |

Table 1 summarizes the primary data sources used in this research, arranged according to their type and significance. These sources include databases that track Chinese foreign direct investment, official government documents from China and Equatorial Guinea, and institutional reports from agencies like the World Bank, AfDB, UNCTAD, and CARI. Media reports and corporate disclosures from significant Chinese companies, such as Sinohydro and CMEC, also provide project-level insights. The table highlights the variety and reliability of the sources used to confirm analytical depth and triangulate results (Gomashie, 2019).

## 4. Findings and Discussion

### 4.1. Equatorial Guinea's Development Landscape

Equatorial Guinea maintains significant petroleum deposits that continue to define its economic situation while serving as the main financial support for a population of 1.5 million people. The discovery and offshore drilling operations initiated in the mid-1990s turned the country into a top-earning per capita nation across Sub-Saharan Africa. The nation's economy depends on oil, which generates over 90% of governmental revenue and almost everything exported from the country, thus leading to economic development (Bank, 2025). The economy maintains a risky financial position because of its dependence on fluctuations in worldwide oil prices, resulting in erratic budget management. Equatorial Guinea experienced previous windfall profits from elevated oil market prices yet failed to utilize these resources effectively to maintain long-term sustainable development, build human capital, and improve infrastructure.

Horizon 2020 and its subsequent development plan, Horizon 2035, diverted the national government toward strategies to decrease hydrocarbon dependency while expanding the economic foundation. Future strategic plans show a vision to turn Equatorial Guinea into a knowledge-based economy through initiatives that promote industrial expansion, education reform, and technology adoption. The Harmonía 2035 initiative implements three specific initiatives to improve public construction while developing human resources and spreading renewable energy programs. The governmental policy focuses on solar and hydroelectric power as essential energy sources because the country seeks to eliminate carbon-intensive power systems (Dept., 2024(025)).

The strategic plans establish a clear vision, yet uneven delivery of these objectives happens because of institutional obstacles and systemic governance complexities. Equatorial Guinea operates a slow-paced bureaucratic system with central authority retention that blocks open administration and delays policy implementation. The failure to enforce regulations, insufficient oversight, and decentralization of decisions have led to the non-achievement of development objectives. The public procurement process operates in obscurity, and business entities fail to join national development initiatives because they lack access to tenders and receive limited government incentives (Guerra, 2018).

The present energy system of the country operates at low-efficiency levels and serves very few population areas. Natural gas and diesel-powered plants generate most power in dense urban areas, yet rural settlements and distant regions consume electricity from environmentally harmful mini-grids based on diesel. The national power distribution system lacks proper development while maintaining separate portions that cause regular electricity interruptions to industrial activities. The current manufacturing restrictions combined with unfavorable conditions work to deter investments from both international and local companies interested in newly emerging economic fields.

Energy sector reform faces significant challenges because Pakistan lacks enough skilled workers to implement complex energy transition projects and sufficient institutional management capability. The absence of qualified engineers, technicians, and policy specialists obstructs advancements in conventional and renewable energy systems and their operational maintenance. The worldwide decline in fossil fuel demand has caused public financial constraints to intensify, thus creating limited government capabilities to fund major infrastructure upgrades. Development finance and concessional loans are unavailable to Equatorial Guinea since the country is categorized as an upper-middle-income nation yet faces multiple poverty-related challenges alongside inequality and poor development statistics.

More intense pressure exists to change toward a sustainable economic structure that no longer depends on oil resources. Equatorial Guinea must transition its energy and industrial systems to a green model due to the declining fossil fuel market value alongside Paris Agreement climate change deal requirements. Implementing renewable energy structures, including solar farms connected to electrical grids, off-grid power systems and hydroelectric mini-dams, will promote global sustainability objectives and establish sustainable power systems. The initiatives would structure employment throughout various industries and bestow power to local populations while developing economic progress for everyone (Han, 2023).

Infrastructure modernization is a modernization tool for driving economic development. Developing roads, ports, digital networks, and logistics management centers creates new opportunities for productivity growth in the agricultural and tourism sectors and services. Implementing these goals requires refined regulatory practices and entries in private finance and well-functioning public organizations. Strategic partnerships between organizations, private entities, and organizational institutions enable the solution of budget constraints for green infrastructure development (Ibrahim, 2022).

The country faces several critical choices at this point. Rapid economic growth from strong oil resources led the nation to develop structural flaws from excessive petroleum dependence. The nation's development plans demonstrate hope for change, but ongoing institutional barriers keep progress from materializing. The government needs core materializing and enhanced governance alongside development planning to shift toward diversifying into sustainable energy with solid infrastructure and renewable sources. The successful management of this transformation will establish Equatorial Guinea as the leading nation in the region for green growth while upholding its national priorities and worldwide climate targets.

Table 2: Equatorial Guinea's Energy Mix and Infrastructure Snapshot

| Indicator | Data / Status | Source |
|---|---|---|
| Primary Energy Source | Oil and natural gas (>90% of energy supply) | Ministry of Mines & Hydrocarbons |
| Electrification Rate (Urban) | ~85% | World Bank (2023) |
| Electrification Rate (Rural) | <30% | African Development Bank (AfDB) |
| Renewable Energy Contribution | <5% (mostly small-scale hydropower) | UNCTAD / IRENA |
| National Grid Coverage | Limited to central urban area | CARI / Government Report |
| Diesel Generator Use in Remote Areas | High (due to lack of grid connectivity) | Media & Project Disclosures (e.g., CMEC) |

| | | |
|---|---|---|
| Planned Green Energy Projects (by 2035) | Hydropower, solar PV pilot projects | Horizon 2035 Development Plan |

Table 2 presents an overview of Equatorial Guinea's current infrastructure and energy situation, highlighting the country's reliance on fossil fuels and the glaring disparity in electrification between urban and rural areas. While access to electricity is comparatively high in urban areas, rural communities remain largely underserved. The national grid is not widely distributed, and renewable energy contributes little. Along with outlining planned green energy initiatives under Horizon 2035, the table highlights the urgent need for sustainable energy diversification and infrastructure modernization (Indira, 2023).

## 4.2. Patterns of Chinese Investment

Equatorial Guinea and China have developed a strong economic bond and substantial infrastructure partnership over the past twenty years. Bilateral diplomatic ties between the countries began in 1970. Yet, the relationship took on a strategic direction when Equatorial Guinea found wealth through oil, and China assumed greater international economic dominance in the early 2000s. Equatorial Guinea received significant portions of Chinese FDI after 2000, which targeted its infrastructure and energy sector development.

According to assorted sources and abstracts accessible through the end of 2022, about 25 to 30 Chinese companies are alive in assorted fields in close Guinea. These companies' awning advanced ambit of industries, including:

Oil Area: Some above-ground oil companies, such as Cinopec and Petrocheina, accept cogent operations in the country.

Industrial Area: Companies such as ZTE (technology), Huawei (mobile communication), and Lenovo (Personics) are present with adumbrative offices or analysis and development centers.

Mining area: There are additionally complex Chinese companies involved in the abstraction of minerals, such as gold and iron.

Equatorial Guinea now wants to diversify its economy as urgency. In a way, we want to do that to be a logistic hub and gateway in Central Africa to take advantage of your location and existing infrastructure. For example, more than 80 percent of the country's roads are confirmed, the highest in Africa. Last November, the African Development Bank approved a 73-million-euro project to construct a bridge connecting Cameroon and Equatorial Guinea (Jain A. M., 2025).

## 4.3 China's Investment Strategy in Equatorial Guinea

China has constructed and built several major infrastructure projects in Equatorial Guinea; thus, Malabo sees Beijing as an important partner. According to China's Ministry of Commerce and the Observatory of Economic Complexity (OEC), the quantity of bilateral trade between the two countries reached $1.75 billion in 2022, with $231 million in exports and $1.52 billion in China (Eguegu, 2024). The primary export product of Equatorial Guinea in China is raw petroleum, followed by petroleum gas and rough wood, while China's export to Equatorial Guinea is more diverse; special-purpose ships, gas turbines, and ceramic bricks are top products between them.

Table 3: List of Chinese Companies Operating in Equatorial Guinea

| COMPANIES | FUNCTIONS |
|---|---|
| Sinopec Group | Operates in the oil sector, with exploration and production activities |
| PetroChina Company Limited | Also involved in the oil industry, focusing on oil extraction and processing |

| | |
|---|---|
| ZTE Corporation | A leading information technology and mobile communications company, with a presence in Equatorial Guinea through representative offices or research and development centers. |
| Huawei Technologies Co., Ltd | Operates in the mobile communications sector, providing network services and advanced technological solutions. |
| Lenovo Group Limited | Operates in the personal electronics industry, focusing on the manufacturing and distribution of computer equipment. |
| China National Offshore Oil Corporation (CNOOC) | Participates in offshore oil activities and has interests in exploration and production projects. |
| State Grid Corporation of China | Operates in the energy sector, focusing on electricity generation and distribution through the Kivu hydroelectric power plant project. |
| China Communications Construction Company Limited (CCCC) | Operates in infrastructure construction, including roads, bridges, and ports. |
| Shandong Energy Group Co., Ltd | Participates in oil and natural gas exploration and production, as well as electric power generation projects. |
| Changsha Tianyi Energy Technology Co., Ltd. | Operates in the energy sector, focusing on technologies for renewable energy generation |
| Equatorial Guinea Shengli Oilfield Development Co., Ltd | This is a joint venture between the Chinese state-owned company Sinopec and the government of Equatorial Guinea to explore and develop oil fields |
| China-Guinean Offshore Petroleum Corporation | Participates in offshore exploration and production activities through partnerships with local companies. |

Major infrastructure and energy projects throughout the country have received participation from Chinese state-owned enterprises, including China Road and Bridge Corporation (CRBC), China Machinery Engineering Corporation (CMEC), and Sino-Hydro. Chinese state enterprises carry out their activities under the Belt and Road Initiative framework to support Beijing's mission of development diplomacy. Modern infrastructure projects in developing countries benefit from financial support from Chinese policy banks, including the Export-Import Bank of China (Exim Bank) and China Development Bank (CDB), through concessional loans and mixed financial instruments (Jain A. M., 2025).

The Chinese investment portfolio consists of highway and seaport development, hydroelectric dam construction, urban power grid establishment, and newer additions of renewable energy pilot projects. Chinese funding has become essential for transforming Malabo's urban framework and developing the power network system in Bata. Furthering China's worldwide green initiative, the country invests in green power infrastructure through small hydroelectric plants and solar photovoltaic installations.

The investments contain various financial models to support them. Construction agreements under Engineering Procurement and Construction (EPC) contracts let Chinese firms manage complete project delivery. The loans also form concessional agreements between states, which use natural resources or sovereign assets as backup guarantees. Public-private partnerships (PPPs) represent new models implemented primarily in energy infrastructure to promote sustainability and neighborhood engagement.

### 4.4. Strategic Adaptation by China

Equatorial Guinea represents a strategic opportunity for China because of multiple reasons. China uses its natural oil and gas reserves to enhance its national energy security while confronting global oil market instabilities. Equatorial Guinea's strategic position in the Gulf of Guinea enables China to expand its territories in Central Africa while executing its African policy. China has started investing in renewable energy projects under its BRI "Green Silk Road" narrative to indicate its commitment towards environmentally friendly development.

China uses these investment approaches to achieve two strategic goals that unite its initiative toward securing interests and becoming a sustainable development partner for Africa. Equatorial Guinea is a key priority in China's evolving African policy because it allows Beijing to conduct diplomatic initiatives relating to environmentally friendly infrastructure development and energy sector collaboration (Donou-Adonsou F. &., 2018) .

### 4.5. Risks and Opportunities

1. The Risks to Chinese Investors

Political Risks: The political system in Equatorial Guinea functions under a centralized structure because its auto-centralized leadership traditionally restricts democratic accountability and political transparency. Political transition or instability increases the risk of policy changes, tract revision and nationalization attempts. China's state nationalizations and policy banks face uncertainty threatening their assets and ongoing project operations (Carter, 2023).

Operational Risks: The operational hurdles of developing countries stem from their deficient transport infrastructure, reliable power distribution networks, and barriers. Project delays for Chinese companies occur because of slow local permitting requirements (Daily, 2018) , inadequate access to expert personnel, and unreliable subcontractor services. Implementing Chinese workforces over local personnel tends to develop social tensions that hinder the smooth execution of field operations (Gao, 2019)

Reputational Risks: The negative public perceptions of China's "debt diplomacy" and murky investment approaches make their reputation suffer in host countries and the wider international community. Multilateral agencies and NGOs have expressed concern because documentation shows poor environmental evaluations, insufficient community stakeholder processes, and inadequate community benefit programs (Green, 2019) . The alignment of projects with sustainability goals and proper adherence to good governance standards determine the reputational risks China faces.

2. Challenges and Opportunities

Chinese energy sector and infrastructure investments in Equatorial Guinea present a challenging situation with significant risks and valuable opportunities. The Chinese economic presence through the Belt and Road Initiative necessitates an understanding of dual effects, as these factors define the viability and impact of future FDI (Kotsantonis, 2016).

Opportunities for Green Development and Infrastructure Growth

Equatorial Guinea presents investors with a productive environment for strategic investment in modern green infrastructure development. The Ministry of New Planning and Economic Diversification announced that one of their priorities was to create an investment promotional agency to serve as a center to provide relevant information to invest in Equatorial Guinea (Guinea, Investment Promotion Agency, n.d.).

In addition, the Finance Ministry has now hosted a virtual legal library on its website, including laws and rules of most aspects of the EG economy, including trade and investment. The country holds several favorable prospects due to its plentiful natural resources, distinct geographic settings, and development requirements (State, 2024)

Renewable Energy Scale-Up: Solar, hydro, and biomass energy are three power sources that Equatorial Guinea has yet to harness fully. The experience of Chinese renewable energy operators throughout Sub-Saharan Africa qualifies them to develop major solar parks and small hydro plants with hybrid mini-grid setups. These investments will improve the country's power generation diversity without depending on fossil fuels and support China's global green development efforts and Equatorial Guinea's Horizon 2035 planning goals.

Grid Expansion and Modernization: Electrical grid expansion and modernization will be a challenge throughout the nation because its systems have not reached adequate development in rural communities. The combination of advanced transmission lines with distribution upgrades, innovative grid system development, and border interconnection networks would strongly boost power reliability and accessibility across the country. Chinese companies' power system expertise allows them to execute EPC contracts, offer financing, and operate complete turnkey projects for grid modernization in Equatorial Guinea.

Technology transfer, modernization, and Capacity Building: Knowledge sharing and workforce development represent a primary opportunity for development. Chinese companies can significantly develop Equatorial Guinea's technical abilities and institutional capacity through specialized training programs, scholars, specialized cities, and local recruitment needs. Creating long-term development and sustainable projects through local ownership and expertise strengthens project sustainability

Regional Energy Integration and Strategic Positioning

The country's membership in the Economic Community of Central African States (ECCAS) enables new Chinese business prospects throughout the region and beyond. Power transmission lines across national borders, pooled hydroelectricity projects, and energy exchange networks optimize operational size while improving optimum power reliability throughout Central Africa (State., 2024).

China pursues regional integration by establishing secure energy routes and expanding its power in the area. Participating in ECCAS-led initiatives will strengthen the impact of Chinese projects and enable better connectivity to African infrastructure, as outlined in the African Union's Agenda 2063.

Chinese investments in Equatorial Guinea face substantial risks due to political instability, operational issues, and reputational damage while presenting significant opportunities across renewable energy development, power grid advancement, and technology and energy network integration throughout the region.

### 4.6. Policy Implications and Analysis

1. For Equatorial Guinea

The regulatory environment in Equatorial Guinea shapes how foreign direct investment (FDI) operates by determining its nature, boundaries, and effects, specifically in the energy sector and infrastructure development. Over the previous two decades, the nation conducted minimal strategic reforms to draw and manage foreign capital with Chinese participation. The insufficient development of governance structures creates essential problems for the successful operation of Chinese investments (Kalu, 2021).

The Investment Charter and the Hydrocarbons Law are the foundation for all regulatory and legal frameworks guiding FDI in Equatorial Guinea (Guinea, Investment Charter of Equatorial Guinea, 2001). These regulatory standards are the foundation for establishing specific license agreements, maintaining revenue splits between businesses, and establishing foreign business participation terms. Project approvals and development plans in the energy sector fall under the oversight control of the Ministry of Mines and Hydrocarbons and the Ministry of Energy and Industry (Guinea, Hydrocarbons Law No. 8, 3 November 2006) . In most cases, the centralized decision-making structure and an inadequate enforcement system restrict transparency and accountability, yet foreign investors must understand this discretionary governance model.

FDI attraction prompts the government to ensure foreign investors through multiple investment benefits, including guarantees against expropriation, tax holidays, and customs exemptions. The provisions appeal strongly to Chinese investors who use concessional finance models or execute EPC contracts. The application of investment incentives remains unclear to many bureaucrats, which results in delayed projects and required contract renegotiation. The dispute resolution systems of legal guarantees remain weak, which causes institutional investors to worry about changes in regulatory frameworks.

2. For China

A growing point of international scrutiny—and a rising concern for China's global reputation—is

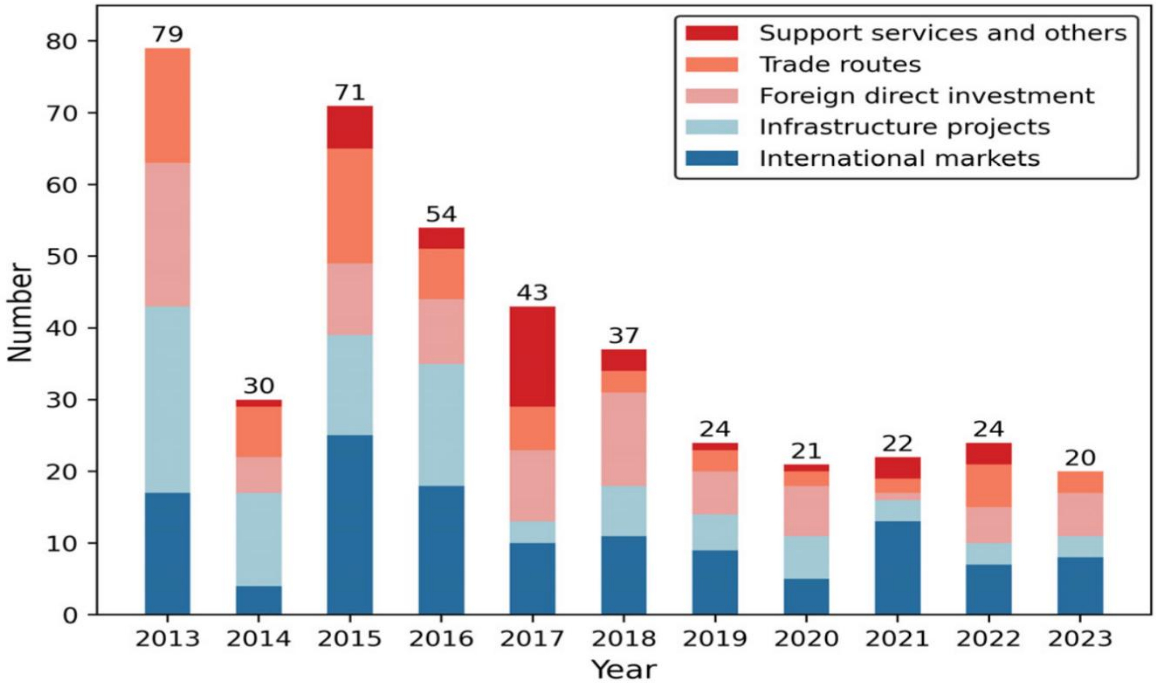
Environmental, Social, and Governance (ESG) compliance. China has firmly supported ESG standards through the Green Investment Principles of the Belt and Road Initiative, yet Equatorial Guinea has shown minimal practice in meeting these standards (Zhang, 2021) . The Chinese projects face criticism mainly due to inadequate environmental assessments, weak engagement with local stakeholders, and insufficient hiring of native workers. Chipotle and other fast-food establishments do not perform well in governance due to inadequate institutional control and minimal civil society involvement in assessing project effects (Khan, 2019).

China follows different investment practices in Equatorial Guinea than their operations in countries like Ethiopia and Kenya, where governance systems have advanced policy reforms to maximize renewable energy transparency and public-private partnership frameworks. China's approach to financing in Angola matches the Equatorial Guinean model by allowing little transparency and imposing excessive dependence on petroleum income. The differences show why strong governance in the host country influences the quality and sustainability of Chinese direct investments (Atitianti, Does Chinese foreign direct investment improve the welfare of Africans?, 2022).

Local challenges persist, preventing the successful implementation of government policies supporting diversification and green energy development. The main critical problems in Equatorial Guinea stem from inadequate institutional capabilities in technical monitoring and regulatory execution, corruption patterns within high-value sectors, and workforce inefficiencies that exclude local workers from participating in Chinese-financed projects. Project achievement and the Equatoguinean state's development prospects suffer from these difficulties that prevent the country from reaching its complete potential through foreign investments (Appel, 2012).

Equatorial Guinea's policy framework presents benefits and risks for drawing Chinese investment because its weak institutions diminish the sustainability of development prospects. Equatorial Guinea requires solutions to its policy challenges that will enable Chinese investment to generate productive outcomes leading toward sustainable green power systems and resilient infrastructure (Large, 2008).

Figure 1: ESG (Environmental, Social, and Governance) trends in Chinese infrastructure projects from 2015 to 2023 (Xuemei Zhou, 2024):




This study provides a comprehensive analysis of ESG disclosure trends among Chinese listed companies from 2006 to 2022. According to the findings, the number of listed firms disclosing ESG information increased from 18 in 2006 to 1,843 in 2022, leading to an overall disclosure rate of 35.86%.

The graphical representation shows Chinese infrastructure project ESG performance development from 2015 to 2023. The data indicates continuous advancement in environmental compliance, social engagement, and governance transparency because China collaborates with global sustainability norms while implementing the Belt and Road Initiative's green investmen principles. However, implementing ESG faces ongoing barriers, mainly in regions where institutions do not have strong oversight capabilities.

3. Policy Recommendations

The full advantages of Chinese foreign direct investment (FDI) within Equatorial Guinea's green energy and infrastructure sectors require an integrated policy arrangement among various stakeholders. The resource wealth of Equatorial Guinea needs to create a strong regulatory structure to support sustainable investments from stakeholders who seek inclusive opportunities. (Lipski, J. M. (2023).

The first step should focus on restructuring management structures that govern energy access, infrastructure projects, and investment facilitation procedures. Date-based legislation reforms should focus on creating efficient public administration while improving collaborative work between departments and building an easily accessible permissions process. By shortening administrative processes, investors will experience fewer project delays while gaining increased trust in Kenya's investment environment. Government officials can create specialized tax and regulatory programs and private sector involvement in green public-private partnerships (PPPs) to help the government use private resources for sustainable facility construction (Miao, 2021).

The state should establish and implement national development strategies corresponding to international climate goals. Governments must establish renewable energy goals, develop green industrial policies, and build frameworks for clean technology innovations. Ministry and Investment promotion agencies should lead national marketing initiatives targeting international alliances to showcase the country's green prospects, especially regarding sustainable progress and inclusive expansion. Combining education and vocational training programs about energy infrastructure will boost local capabilities and decrease foreign labor dependency for project success (Development, 2021, ).

ESG compliance demands immediate action from top Chinese stakeholders, including state-owned enterprises (SOEs), the China Exim Bank and China Development Bank (CDB), and diplomatic agencies. Implementing ESG principles in all investment phases, including planning, financing, execution and monitoring, will generate dual benefits by managing environmental and reputational risks and following international development requirements. Meaningful relationships between China and local communities, civil society organizations, and host government organizations are needed to build trust and achieve social harmony to deliver inclusive development. Local content policies from China should receive support through programs that transfer skills, fund training institutions, and create partnerships that allow technology and knowledge to spread (Munjal, 2022)

Beyond China and Central African states, regional organizations led by the African Union, such as the Community of Central African States and the African Development Bank, should actively participate in this development through support from global financial institutions. These entities must establish complementary energy policies supporting power system integration across borders. Identifying profitable renewable energy and electrical infrastructure investment opportunities throughout various border regions becomes possible through studies that receive funding support, decreasing investor risks. These actors must create blended finance instruments from public funds, concessional finance, and private investments to reduce the risks of green infrastructure projects that attract institutional investors (Nyadera, 2021)

A policy framework focused on the Future will enable Equatorial Guinea, China, and regional actors to meet sustainability goals as it ensures continuous championing of green transformation by Chinese investment. The recommended measures will produce a development approach that delivers enduring benefits to every stakeholder by emphasizing openness, inclusive approaches, and environmental accountability.

3. Discussion

The findings of this research indicate complex interrelation of Chinese foreign direct investment (FDI) and sustainable development in Equatorial Guinea, in such areas as green energy and infrastructure. Chinese FDI that follows strategic national interest but implemented by state-owned enterprises, has supported necessary infrastructure development in Equatorial Guinea. Road construction, power grid extension and renewable energy pilot programs — all projects involving major investments of Chinese money — indicate Beijing's double intentions. Developing access to natural resources and its Belt and Road Initiative (BRI) in Central Africa. Though to a large degree, the success of such investments is conditioned by Equatorial Guinea's internal issues of governance. These weaknesses in regulatory transparency, low level of ESG compliance and scanty local workforce integration dilute the possibility of inclusive and sustainable outcomes. While China has, on the world stage, been turning green under BRI's

“Green Silk Road,” operational attitudes lag behind those promises in Equatorial Guinea because of institutional weakness and lax policy compliance.

The gap between ambitious national development plans (Horizon 2035, Harmonia 2035) and actual implementation is also a subject of the research. Although the government is attempting to stimulate adoption of renewable energy and modernization of infrastructure, bureaucratic reluctance and centralized decision making hinder progress. However, the technical competence and the use of concessional financing, as well as the ability to deliver the turnkey projects by China, offer promising opportunities – especially for the purposes of their integration into the clearly defined national and regional policy framework.

There is therefore, need to come up with a collaborative effort that entails enhanced local governance as well as transparent investment mechanisms and improved stakeholder engagement if the dual interests of Equatorial Guinea and Chinese investment are to be maximized by the project, without hurting the country’s long-term development and sustainability goals.

## 5. Conclusion

Chinese foreign investment has come to be a foundation of efforts of Equatorial Guinea towards economic diversification and introduction of renewable energy as well as contemporarization of the infrastructure. This research finalizes that; although China’s participation brings life-saving resources and technical skills; the sustainability and inclusivity of these investments depend on active local governance and policy alignment with involvement of the community.

Overreliance on sales of petroleum by the Equatorial Guinea has always weakened its economic flexibility. The increased global push towards green energy speeds up an opportunity for China’s renewable energy investments in the country, especially for solar and hydroelectric projects, as a viable path to the clean energy promises of Horizon 2035. However, as the study points out, fundamental problems such as foreign investment failing due to weak institutional capacity, ineffective ESG compliance, and low participation of local labor as part of the foreign investment, continue to be a barrier to maximizing the development influence of Chinese FDI.

In a policy context, Equatorial Guinea needs to institutionalize robust regulatory structures that can enable open public-private partnerships (PPPs), environmental conservation and indigenous capacity building. At the same time, China should strengthen its ESG monitoring and adjust its investment practices to induce inclusive and environmentally friendly growth consistent with domestic policy reforms and hosts’ needs.

Further, regional environment especially on the basis of such formats as ECCAS and African Union’s Agenda 2063, represents a key opportunity for the use of the Chinese investments for the purposes of transnational cooperation in energy sector and integration of infrastructures. It is not merely a development obligation but also a geopolitical necessity for Equatorial Guinea to become a transport and energy site of central Africa. Essentially, the long-term success of Sino-Equatoguinean cooperation is determined by a common strategic goal of governance reform, sustainability and regional integration

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**References**

Acaru, S. F. (2022). In sentence case (only first word capitalized). Heliyon, 8, 8–9.

Ahmad, M. S. (2022). Does Chinese foreign direct investment (FDI) stimulate economic growth in Pakistan? An application of the autoregressive distributed lag (ARDL bounds) testing approach. Energies, 5(6).

Akinola, A. O. (2022). COVID-19 and South Africa–China asymmetric relations. World Affairs, 185(3), 587–614.

Appel, H. (2012). Offshore work: Oil, modularity, and the how of capitalism in Equatorial Guinea. American Ethnologist, 39(4), 692–709.

Atitianti, P. A. (2022). Does Chinese foreign direct investment improve the welfare of Africans? Journal of African Business, 23(4), 964–983.

Baughen, S. (2019). Shipping law (6th ed.). Routledge.

Carfora, A., & Scandurra, G. (2024). Boosting green energy transition to tackle energy poverty in Europe. Energy Research & Social Science, 110.

Carter, E. (2023). Political risk assessment for Chinese investment in Africa. Global Finance Review, 15(2), 45–62.

China Daily. (2018, September 25). China Daily. https://www.chinadaily.com.cn/china/2018-09/25/content_38044562.htm

Donou-Adonsou, F., & Lim, S. (2018). On the importance of Chinese investment in Africa. Review of Development Finance, 8(1), 63–73.

Ebekozien, A. S. (2023). Unravelling the encumbrances in procurement management of Nigeria's infrastructure development: Pitfalls and prospects of projects. Property Management, 41(1), 20–40.

Eguegu, O. (2024, June 10). China and Equatorial Guinea: Why their new 'comprehensive strategic partnership' matters. The Diplomat. https://thediplomat.com/2024/06/china-and-equatorial-guinea-why-their-new-comprehensive-strategic-partnership-matters/

Ezie, K. N. (2024). Marburg virus outbreak in Equatorial Guinea: Need for speed. Annals of Global Health, 90(1).

Gao, J. L. (2019). Labor relations in China's construction industry. Journal of Construction Engineering and Management, 145(4), 04019013.

Ghorbani, Y. Z. (2024a). Embracing a diverse approach to a globally inclusive green energy transition: Moving beyond decarbonization and recognizing realistic carbon reduction strategies. Journal of Cleaner Production.

Ghorbani, Y. Z. (2024b). The strategic role of lithium in the green energy transition: Towards an OPEC-style framework for green energy-mineral exporting countries (GEMEC). Resources Policy, 90.
Gomashie, G. A. (2019). Language vitality of Spanish in Equatorial Guinea: Language use and attitudes. Humanities, 17(1).
Government of Equatorial Guinea. (2001). Investment Charter of Equatorial Guinea. Ministry of Economy and Finance.
Government of Equatorial Guinea. (2006, November 3). Hydrocarbons Law No. 8. Ministry of Mines and Hydrocarbons.
Government of Equatorial Guinea. (n.d.). Investment Promotion Agency. https://www.investinequatorialguinea.com/
Green, M. (2019, April 25). China’s debt diplomacy. Foreign Policy. https://foreignpolicy.com/2019/04/25/chinas-debt-diplomacy/
Guerra, M. D. M. (2018). Malaria determining risk factors at the household level in two rural villages of mainland Equatorial Guinea. Malaria Journal, 17(1).
Han, J. X. (2023). Green technologies, government stability, and green energy transition in a globalized world: Evidence from E-7 nations. Environmental Science and Pollution Research, 30(40).
Ibrahim, K. H. (2022). Services trade and infrastructure development: Evidence from African countries. Cogent Economics & Finance, 10(1).
Indira, A., & Sharma, R. (2023). Infrastructure development in India: A systematic review. Letters in Spatial and Resource Sciences, 16(1).
International Monetary Fund. (2024). Republic of Equatorial Guinea: 2023 Article IV Consultation—Press Release; Staff Report; and Statement by the Executive Director for Republic of Equatorial Guinea (Country Report No. 24/025). https://www.elibrary.imf.org/view/journals/002/2024/025/article-A001-en.xml
Jain, A. M. (2025a). AI-based content creation and product recommendation applications in e-commerce: An ethical overview. International Journal of Scientific Research in Computer Science, Engineering and Information Technology, 11(1).
Jain, A. M. (2025b). Enhancing e-commerce accessibility with AI-powered chatbots: Integrating accessibility tools and navigation assistants. Journal of Information Systems Engineering and Management, 10(15s).
Jain, A. M. (2025c). The role of predictive analytics in e-commerce conversion rate optimization. Journal of Computer Science and Technology Studies, 7(2), 114–121.
Kalu, K. (2021). Respect and agency are the driving forces behind China-Africa relations. Place Branding and Public Diplomacy, 17(4), 336–347.
Khan, A. W. (2019). Deficiencies in project governance: An analysis of infrastructure development program. Administrative Sciences, 9(1).
Kotsantonis, S. P. (2016). ESG integration in investment management: Myths and realities. Journal of Applied Corporate Finance, 28(2), 10–16.
Large, D. (2008). Beyond “dragon in the bush”: The study of China-Africa relations. African Affairs, 107(426), 45–61.
Miao, M. B. (2021). The impacts of Chinese FDI on domestic investment and economic growth for Africa. Cogent Business and Management, 8(1).
Munjal, S. V. (2022). A comparative analysis of Indian and Chinese FDI into Africa: The role of governance and alliances. Journal of Business Research, 149, 1018–1033.
Nyadera, I. N. (2021). China–Africa relations: Do non-economic drivers matter? Africa Review, 13(2), 175–198.
Ozdel, M. (2014). Multimodal transport documents in international sale of goods. International Company and Commercial Law Review, 25(7), 243–250.

United Nations Conference on Trade and Development (UNCTAD). (2021, October 28). Green industrial policies key for developing countries to adapt to climate change. https://unctad.org/news/green-industrial-policies-key-developing-countries-adapt-climate-change
U.S. Department of State. (2024). 2024 Investment Climate Statements: Equatorial Guinea. https://www.state.gov/reports/2024-investment-climate-statements/equatorial-guinea/
World Bank. (2025, March 4). Equatorial Guinea country economic memorandum – Building the foundations for renewed, more diversified and inclusive growth. https://www.worldbank.org/en/country/equatorialguinea/publication/equatorial-guinea-country-economic-memorandum-2025-building-the-foundations-for-renewed-more-diversified-and-inclusive-growth
Xuemei, Z., & S., J. (2024). Sustainable pathways: ESG disclosure performance and optimization in China. Sustainability.
Zhang, Y. W. (2021). ESG performance and investment in China: An overview and future directions. Journal of Sustainable Finance & Investment, 11(3), 163 – 181.